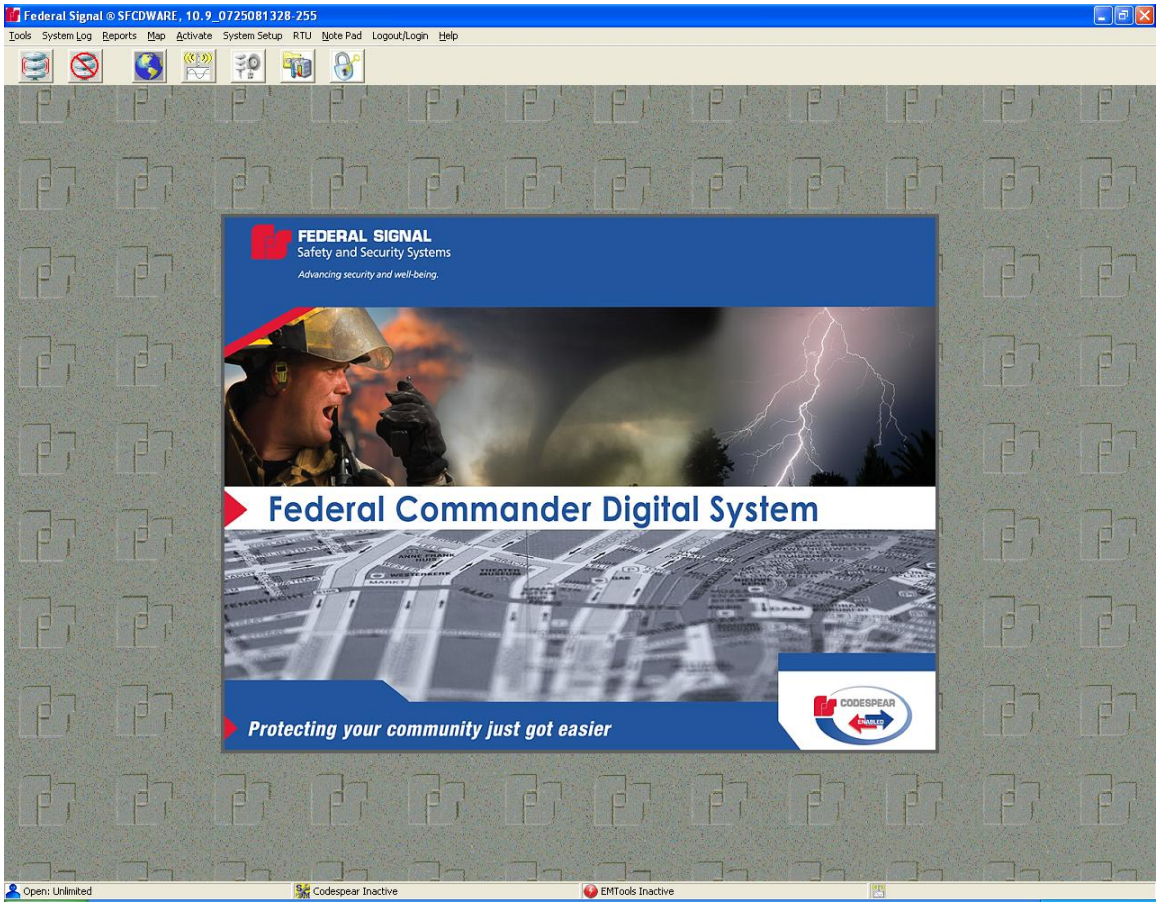
The Federal Commander™ DIGITAL TELEMETRY SYSTEM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Tools System Log Reports Map Activate System Setup RTU Note Pad Logout/Login Help
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SFCDWARE© Software
Reference Manual

Part No. 255327G Rev G2 (V11.x)

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Introduction

Traditionally, siren systems have been controlled via Two-Tone Sequential (Duotone) or DTMF radio encoding systems. These systems offer limited performance over a radio system in terms of speed, reliability, security, and status monitoring capabilities. Advances in modem technology allow a modern digital telemetry system to function under marginal radio conditions that would render Tone and DTMF unusable. The Commander was developed by Federal Signal Corporation to be the best system available for automating the management of indoor and outdoor warning systems using a very reliable digital modem technology developed specifically for wireless communications.

Main Features

- Reliability -- The digital modem technology used is designed specifically for wireless communications providing reliable communications under harsh radio conditions.
- Security -- The digital encoding scheme provides protection from malicious activation. Messages cannot be taped and played back to activate the system. Multiple levels of passwords are available to secure operation and configuration of the system.
- Automation -- The Software can be setup to automatically test and poll the system for reports at predefined intervals.
- Ease of Use -- The graphical user interface is requires very little training to use. All user specific information can be easily configured by the user.
- Reporting -- Details status reports can be generated based on predefined sorting criteria.
- Programming -- Siren sites can be programmed from the control center over the radio link. Communications parameters, siren tone type and length, zoning, and reporting options are a few of the remotely programmable features.
- Digipeating: -- This feature provides the capability of using siren sites as radio repeaters to reach sirens out of reach from the base station radio. Digipeating can eliminate the need for complex and expensive radio repeater systems under many circumstances. Digipeating cannot be used with live broadcast voice announcements.
- Dynamic Grouping -- Sirens may be grouped in zones for activation. These zones are easily configured by the user and can be changed without the need to go to the remote site.
- Alarm Reporting -- The Commander system can be set up to automatically call up to ten phone numbers in case of an alarm at a remote site. Users can also call into the system to retrieve alarm messages. All messages are real voice announcements and are password protected.
- On-Screen Mapping -- High resolution graphics depict siren locations on an actual map of the siren system. Siren locations are easily set up by the user and are color coded to indicate the status of the remote site.
- Compatibility -- The Commander is downwardly compatible with existing control systems. It can decode any combination of Single Tone, Two-Tone, and DTMF as well as FSK. This makes system integration possible without completely changing all sirens at once.

- Fault Tolerance -- The system is very tolerant of adverse radio conditions. It will automatically retry to send messages that are not acknowledged. The system can be completely controlled via the SS2000D in case of a primary computer malfunction.

- Remote Access &Support -- Users may dial-in to the system to take control from a remote location. This feature may also be used to enable remote factory support via phone line.

- Multiple Base Station Operation -- All system activity will be logged at all system bases. This feature enables each base to record activation commands and RTU reports from any source.

- Y2K Compliant -- All software used is Y2K compliant.

- Internet or Intranet Access – Special SFCDWARE Client software allows access to your system over the Internet or Local Area Network.

- Codespear Enabled – SFCDWARE10.x is Codespear Enabled, allowing SFCDWARE to communicate with sirens and other Codespear enabled devices on the Codespear platform (Ref SmartMsg Deployment Guide Version 5.2).

The Federal Commander Digital System is designed and manufactured with all these advantages in mind. Furthermore, the Commander employs the same rigorous quality in design and manufacturing standards that have become the trademark of Federal Signal Corporation products.

The remainder of this section briefly describes the components of The Commander.

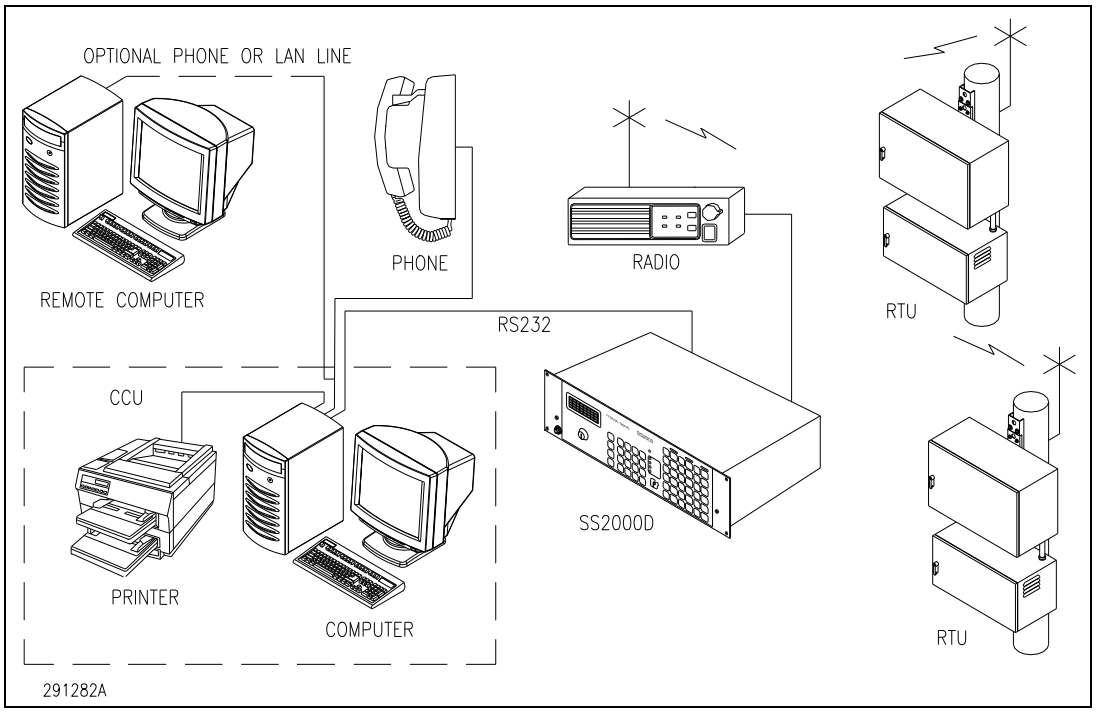


Figure 0-1 above, illustrates the basic configuration of The Commander System

The Commander is made up of three main components:

CCU (Central Computer Unit)
SS2000D (Siren Controller / Radio Modem Terminal Unit)
RTU (Remote Terminal Unit or Siren Controller at remote site)

CCU Description

The following is a list of specific hardware components that are required for successful operation of the CCU.

- An IBM Compatible Computer - Pentium or greater CPU running at 2.8 Ghz or faster.
- Two Gigabytes or more of Random Access Memory (RAM).
- Two spare PCI BUS ports
- 160GB Hard Disk Drive or larger.
- SVGA Color Monitor and Controller. (800 x 600 resolution minimum, 24 bit color recommended).
- CD RD-W Drive.
- 101-key Enhanced Keyboard.
- One Parallel Printer Port - LPT1
- One RS-232 Serial Port.
- One Creative Labs Modem Blaster Flash56 PCI DI5630 Voice Modem (Note: Two modems and phone lines are required if the Remote Control feature and the Automatic Alarm Call-out option are to be used simultaneously. The PCI DI5630 type modem is a mandatory requirement for the Alarm Call-out feature).
- Mouse pointing device.
- Dot Matrix Printer 24-Pin with Parallel Interface and cable.
- Phone Line (Required for voice call out and remote dial-in features).
- AC surge suppression device
- UPS (Optional equipment to provide CCU backup in case of primary AC failure).
- Measurement Computing IO Board (Optional)

The following is a list of specific software packages that are also required for successful operation of the CCU.

Microsoft Windows™ XP SP2, Windows2003, or VISTA operating system.

Other versions of Windows are not recommended for use with the Digital Commander software.

Note: The model SFCDWARE includes the following items: SFCDWARE CD, Software, Creative Labs modem, Serial cable (SS2000 to computer).

Microsoft Windows™ is the Graphical User Interface (GUI) and provides the primary interface between the user and the computer. Windows is designed to be used with a pointing device, usually a mouse, which is used to make screen selections.

Because the CCU uses the Microsoft Windows operating system, the CCU can also run many other popular Windows compatible software packages.

The SFCDWARE Software provides the control programs that handle the CCU operator interface.

All of the software packages mentioned are loaded onto the computer hard disk drive before the CCU is installed at its permanent location. The only time floppy disks or CD ROMS are used is to perform a backup of the data files or to install a update of the SFCDWARE software.

The CCU provides the operator interface to the siren system and serves as its command center. It is used to control sirens, command displays and printouts, and to store all incoming alarm messages and status messages for later retrieval and analysis. Also the CCU can be used to initiate communications with the RTU(s) to obtain status data and to program sirens remotely.

For permanent records, the CCU data can be printed out on any printer which can reproduce the entire ASCII character set as well as dot addressable graphics.

The CCU is the control station workhorse of The Commander. It serves four major roles: (1) as a control console to activate the RTUs; (2) as a data storage site to collect status and alarm data from all RTUs in the field network; (3) as an action station to alert key support personnel that an alarm has been triggered at some RTU, that an RTU has failed to respond to a command, or that an RTU's main power has failed and (4) as a programming console to configure radio communications parameters and remotely program RTUs.

The CCU can be configured to automatically poll all the RTUs under its command for status data, on any schedule. Incoming messages to the CCU are stored on the CCU's hard disk, along with complete identification of the originating RTU.

The CCU can be configured to automatically activate the RTUs under int’s command on any schedule.

An incoming message that is interpreted as an Alarm such as; Loss of primary power or Local Activation, can be configured to initiate a unique automatic telephone Alarm Call-out system contained in the CCU. This system can dial up to ten pre-assigned telephone numbers and report the alarm conditions to a key support person in an electronically stored human voice. When the call is acknowledged, the CCU discontinues further Call-outs until a new alarm condition occurs. Users may also dial into the CCU to retrieve current Alarm messages over the phone.

The system also supports remote control and maintenance support over a standard phone line. Users may dial into the CCU from a remote computer to control and monitor all portions of the system. Maintenance personnel may dial into the system to provide remote service and support. All dial in features may be password protected and encrypted.

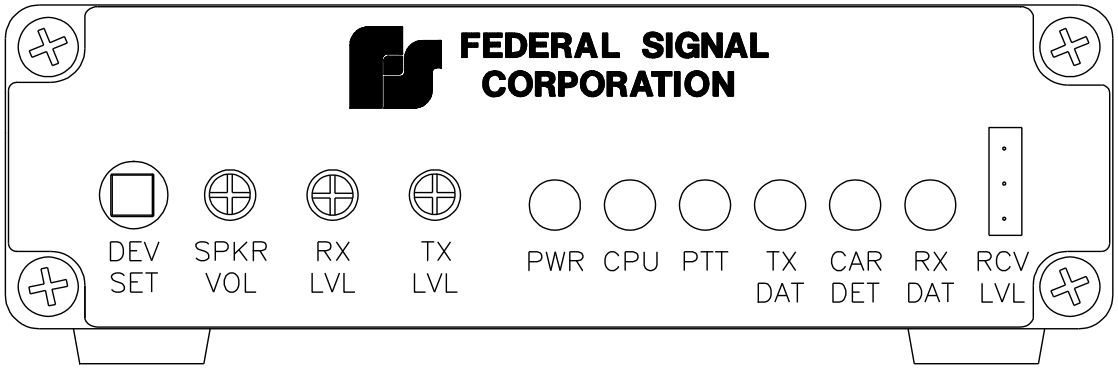
SS2000D Description

The SS2000D serves as the interface between the CCU computer and the radio transceiver. It also functions as a stand alone terminal unit with activation and status reporting capability in case of a PC failure. The SS2000D communicates with the CCU computer over a standard RS232 serial port. Further details of the SS2000D are included in the SS2000D product manual.

A complete Commander system may contain multiple base stations (CCUs and/or SS2000Ds). Each base station is addressed as a Primary or Secondary site. RTU initiated transmissions (e.g. Intrusion, Power Fail) are sent to the last Primary base station to poll the RTU for status. RTU initiated transmissions are never sent to a Secondary base station. A typical system consists of one Primary base station for system management, and several SS2000D Secondary sites used as remote activation points. All base stations in the system will receive alarm messages and poll response data sent from RTUs by eavesdropping, even if set to secondary address.

IMPORTANT NOTICE: The encryption scheme used to secure data transmissions includes the time of day in encryption calculation. All activation points must have their internal clocks set to the same time (within +/- 90 minutes) in order to activate the system.

MODEM-MSK Description



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The MODEM-MSK is a radio modem that connects the PC running The Commander software to a radio transceiver. The MODEM-MSK does not have a keypad or display like the SS2000D radio modem. The modem is 1.32” high, 4.18” wide, and 6.54" long.

Features

- Universal transceiver interface connects to a wide range of transceiver types
- Power, communications status, as well as receive level indicators
- Integral speaker for monitoring of communications
- Easy installation and alignment
- 1200 or 2400 baud communications
- Integral 600-Ohm interface for transceiver interface or wire-line control
- Integral RS232 and USB ports for local control, configuration and diagnostics
- Capable of 2-tone, DTMF, EAS, MSK, and PL encoding

RTU Description

For purposes of this manual, an RTU (Remote Terminal Unit) consists of the siren control unit, usually a Federal Signal model FCT, MCPT, Ultra Voice, or UVIC series controller.

The RTU is a completely self contained single board microprocessor based monitoring and control unit. It has the capacity to store siren activation functions uploaded from the CCU or SS2000D. It also collects siren status and diagnostic information for report back to the CCU. All programmable parameters are stored in non-volatile memory and are not dependent on battery backup.

Each RTU can communicate status and alarm data to one or more CCUs or other RTUs over a radio link, or dedicated telephone lines, depending on the individual system ordered. All data are transmitted in a digital format as a stream of characters, serially organized and transmitted at a rate of 1200 bits per second.

In the system network, the RTU and the radio modem (SS2000D or MODEM-MSK) work as a complex data communication pair. Data protection techniques and handshaking is included so that messages do not get corrupted and are received correctly.

If an alarm condition is reported by the RTU, the CCU can be programmed to initiate an alarm and place a series of telephone calls until it reaches and reports to key support personnel. Status alarms from any RTU are handled the same way so that maintenance action can be taken at once. This means that alarms can be set up to trigger as they happen enabling action to be taken before extensive downtime occurs.

Any RTU in the system may act as a communication repeater, allowing wide area coverage capabilities without the necessity of expensive high power transmitters or large antenna arrays.

The Commander System RTUs are designed with reliability as a number one priority. In the unlikely event an RTU fails, the entire control board in the RTU assembly may be switched out by non-technical personnel in less than 5 minutes with only a standard screwdriver.

Further details of the RTU are included in user manual for the type of RTUs included with your system.

Definition of Windows Terminology

DATA ENTRY FIELDS - This term refers to any data field that requires keyboard input. To replace the contents of a data entry field, position the mouse pointer at the first character or number in the field, push and hold down the left mouse button, drag the mouse pointer across the rest of the data in the field, and then release the left mouse button. The result will be that all of the previous data in the data entry field will become highlighted. This will select the field for data entry. Anything that is typed will then replace the current contents of the field. It is not necessary to press the ENTER key, but it is necessary to select the SAVE radio button to save any changes to a data entry field.

DOUBLE CLICK - This term refers to making a selection on a windows screen that requires two quick clicks of the mouse button. When in doubt, POINT & CLICK first, and if that doesn't work try a double click on the same item.

LIST BOXES - This term refers to a screen window that contains multiple lines of related data, such as the Status Summary of Listed RTUs window. Sometimes the data in a list box is for information purposes only. Other list boxes are used to present the user with a list of choices. To select one of the items in the list box, point and click on it with the mouse pointer. The item selected will become highlighted. If more lines are in the list box than can be displayed, a scroll bar will be displayed to allow the user to scroll through the complete list of items.

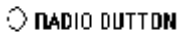
MOUSE - This term refers to a pointing device attached to the computer. The mouse itself is about 2 inches wide and 4 inches long, with a hard rubber ball on the bottom, 2 or 3 buttons on the top, and with a cable coming out of the top end which connects the mouse to the computer. The mouse is usually operated with the right hand, by placing the hand so that the index finger rests comfortably on the left mouse button. As the mouse is moved across the desktop, an on screen pointer moves in the same direction. The pointer is usually an arrow that points up and to the left. When using the mouse pointer to point to a desired selection, position the point of the on screen pointer to the desired selection.

MULTI-TASKING - This term refers to a computer system that is capable of running more than one task or program at the same time. Microsoft Windows is a multitasking environment. This means that the user can start a second program without stopping the first program. In fact, many programs can be started and running at the same time. The only restriction is the amount of RAM memory available to the computer. The advantage of having more than one program running at the same time is that when a user wants to change from one program to another, it is a very fast operation, because the user does not have to stop the first program before starting the second. In reality, the computer can only run a single program at any point in time. Multitasking is a method of causing the computer to work on task 1 for awhile, then internally switch to task 2 for awhile, then to task 3 for awhile, and then back to task 1 for awhile, transparently to the user of the computer.

ON SCREEN POINTER - This term refers to a shape on the screen that follows the movement of the pointing device. This usually means that an arrow pointed up and to the left follows the movement of the mouse.

POINT & CLICK - This term refers to making a selection on a windows screen with the mouse pointing device. To make a selection, position the on screen pointer to the desired selection, and then quickly push and release the left mouse button once.

PUSH BUTTON - This term refers to a screen item that looks like a 3 dimensional button. This style of button usually has a word or symbol inside the area of the button that describes the action that will be taken when the button is pushed. To push a push button, point & click on it with the mouse pointer.



RADIO BUTTON - This term refers to a screen item that looks like a circle about 1/8 of an inch across. Sometimes radio buttons will have a word to the right of the button, that describes the action that will be taken when the button is pushed. Sometimes radio buttons have no description, but the button itself will appear just to the right of another small information window. In this case, when the button is pushed, the contents of the small window to the left of the radio button will change. To push a radio button, point & click on it with the mouse pointer.

SCROLL BAR - This term refers to a small rectangular window, inside another window, that is used to move the list of screen choices. A scroll bar can be either vertical or horizontal. There are several parts to the scroll bar: Up Arrow (Right Arrow), Down Arrow (Left Arrow), Thumb Wheel, the space between the Up Arrow and Thumb Wheel, and the space between the Down Arrow and Thumb Wheel. Any one of these scroll bar parts can be selected with point & click. Up Arrow will move the list of items inside the list box down one line (like moving the window up one line), Down Arrow will move the list of items inside the list box up one line (like moving the window down one line). The space between the Thumb Wheel and the Up Arrow will move the list of items down one window full at a time. The space between the Thumb Wheel and the Down Arrow will move the list of items up one window full at a time. The Thumb Wheel itself can be moved with the mouse pointer. To move the Thumb Wheel, position the mouse pointer on the Thumb Wheel and then press and hold down the left mouse button. While holding down the mouse button, drag the Thumb Wheel either direction inside of the scroll bar. When the Thumb Wheel is moved to the relative location desired, release the left mouse button. The effect will be as though the scroll bar had been moved the same relative distance through the complete list of data.

SELECTING A DATA ENTRY FIELD - This term refers to the process of highlighting a data entry field in order to change or replace the contents. See DATA ENTRY FIELD for more details.

SELECTING AN ITEM - This term refers to the process of making a selection from several screen choices. Generally, selecting an item means to point & click on the desired item. There are several types of arrangements for items that can be selected. There are data entry fields, push buttons, radio buttons, and list boxes.

TASK - This term refers to a computer program that is currently running on a computer system.

Word processing programs or spreadsheet programs are usually single tasks in the computer system. Because Windows is a multi-tasking environment, multiple programs may be running at the same time. To ensure adequate computer resources are available, consult your MIS department or Federal Signal Applications Engineering staff if other software programs are desired to be run concurrently with the SFCDWARE program.

WINDOW - This term refers to an area of the screen that is enclosed by a border. A window can be any size. Some windows can be adjusted in size. Windows can overlap other windows. At any one time, more than one window can be displayed on the screen. Generally speaking, each different window is a different task in the computer system. No matter how many windows are currently displayed, only one window can be active to accept user input at a time. An active window means that a particular window is ready to accept user input. To make another window active, POINT & CLICK on any visible portion of the window you want to make active.

Theory of Operation

The Commander SFCDWARE software is used to configure, control, monitor and record all activity of the siren system. The software communicates with an SS2000D over an RS232 port or a MODEM-MSK over a USB port. The SS2000D or MODEM-MSK radio modem converts the data received by the PC into audio frequencies for transmission over the radio and converts audio received from the radio to data to send to the PC.

The CCU can be controlled remotely over the Internet or LAN using SFCDWARE Client software, or via a Federal Signal Codespear network server. The SFCDWARE program includes software to control a voice/data modem for placing and receiving calls regarding alarm events.

The various monitoring points include:

- AC Power Sense
- Battery Condition
- Siren Rotation
- Siren Activation Current
- Intrusion
- Pressure (Optional)
- Local Activation
- Amplifier/Driver Status

Depending on the type of RTUs in your system, additional monitoring points may be available.

Communication

The Commander System is expandable to handle virtually any siren network, regardless of its magnitude of complexity. The system is designed to work from conventional base station(s), through a conventional repeater network, and over trunking radio systems. In some cases, the digital repeater option can be used to eliminate the need for expensive conventional repeater systems.

Depending on the RF frequency chosen and the type of communications architecture desired, a variety of antenna systems are available from Federal Signal. These options should be discussed with the Federal Signal FWS Applications Engineer or with the local radio shop supplying the communications equipment.

The digital radio modem uses standard audio tones which are very close together in frequency at low baud rates. This enables the modem to be used with virtually any type of radio.

The multi-format decoding capability of the Federal Commander System RTUs enables seamless integration with existing Duotone and DTMF control systems. Thus, the design and engineering concepts behind The Commander lets you start out with an optimum system to handle your present needs, and to expand that system as your future needs grow. And, because the Commander System building blocks contain Federal Signal's high standard of quality, you can be assured of complete system compatibility, now and for years to come. This means that a system you install today will not become obsolete tomorrow, even though technology is advancing at a rapid pace.

Codespear

SFCDWARE version 10 and greater have the option of using the Codespear network software to communicate with sirens on a broadband IP enabled network. This option provides a secure and redundant networking platform and an easy to use GUI that can activate sirens and initiate SmartMsg alerts with a single mouse click. Additional Codespear software modules purchased separately are required to use this feature. See http://Codespear.com for additional information on the Federal Signal Codespear product line.

Networking Information

SFCDWARE utilizes the following IP port numbers:

Codespear:	16887
Sfcdware Client:	51289

Eavesdropping Feature

Eavesdropping allows all CCUs in a system to log activation requests from peer control points and record RTU initiated alarms, even though the message is addressed to another CCU.

A siren control system may contain multiple monitoring and activation Points or base stations. A CCU may consist of an SS2000D or a radio modem attached to a SFCDWARE computer. Each base station will log (SFCDWARE) or print (SS2000D) an activation initiated by any other base in the system. SFCDWARE will also log activation's initiated by the local SS2000D attached to it. RTU initiated transmissions will be logged and/or printed by all base stations in the system; however only the station the message is addressed to will acknowledge the transmission. RTU Initiated transmissions are sent to the last primary base station that it received communication from. In multiple base systems, it is important that each base station be set to a unique address. Address 900-904 is primary, and 905-909 secondary. It is best to designate one base as primary or the master base, and set all other base stations to a secondary address. The remote sirens will continue to repeat transmission of alarms until the primary base has correctly received and acknowledged the message or the maximum number of transmissions has been sent.

Size

An installation can start with a minimum system as small as one RTU and one CCU. Then, as the demand grows, this basic system can be expanded to include multiple base stations and up to a maximum of 255 RTUs.

System Operational Overview

System configuration information for the CCU and the RTU(s) is entered at the CCU using the SFCDWARE System software. . The RTU configuration data is then sent to each RTU separately.

The CCU is usually setup to automatically poll all of the RTUs one or more times per day. When a predefined automatic poll time is reached, each RTU is polled in sequence.

When an RTU detects an alarm condition, it will send an alarm message to the CCU describing

the nature of the alarm. The CCU will then acknowledge the receipt of the alarm back to the RTU that sent the alarm. If no acknowledge is received, the RTU will retry up to ten times. An alarm is defined as any RTU originated transmission.

Certain kinds of alarms can cause the SFCDWARE System to call-out an alarm condition to key support persons on the Call List (optional). The Call List is used in order of priority number, with zero (0) being the first priority number. If the first person on the Call List is not available, the CCU will try Calling the person on the Call List with the next higher priority number. The CCU will continue to call people on the call list, at five (5) minute intervals, until somebody acknowledges the outstanding alarm. When the Codespear option is purchased, alarms can be received via, email, phone, pager, SMS, and screen pop-ups.

The CCU is capable of activating RTUs individually, in zones or all sites at once (all call). When integrated with the EMTools software option, RTUs can be selected graphically on a geo-coded map display.

Data Files

All of the configuration data entered by the user plus all of the data received from the RTUs is saved in the following data files:

ALARMLOGmm_yy.DAT (mm = month, yy = year).

> Monthly alarmlog file. Contains System Log information for the indicated month and year. A new monthly alarmlog file is created each month. Monthly alarmlog files are accessed by the system log report generator.

ALARMLOG.DAT:

> Contains the most current system log entries up to a maximum of 1000 records. The data displayed on the System Log screen is saved in the alarmlog.dat file. Voice call-out uses the alarmlog.dat file for the annunciation of outstanding alarms.

BASE.DAT:

> Contains the configuration data for the CCU itself and any other data that applies to the SFCDWARE System in general.

CALLLIST.DAT:

> Contains the names, phone numbers, passwords and priority assignments for those people on the emergency call list.

COMLOG.DAT:

> Contains all of the data transmitted through the serial RS-232 data port, for both incoming and outgoing data. This data is only for debugging purposes and is not required for operation.

RTU.DAT:

> Contains the configuration and status data for all RTUs. This data is sent to each RTU during RTU configuration and is updated after each poll response.

MAPPING.DAT:

Contains the virtual site number assignment of each RTU. Virtual site numbers in lieu of actual site numbers and displayed by the SFCDWARE system software.

PAMESSAGES.TXT:

Contains predefined public address messages used for the Select Message option on the Public Address dialog. This file may be edited with Wordpad or other generic text editor programs.

VOICE.TXT:

Contains strings used to configure Dynamic Digital Voice on the Program Hotkey and Manual Activation screens. The messages in this file must match the digital voice chip in the RTU. This file is supplied by Federal Signal and should not be modified by the user.

ALARMS.DAT

The ALARMS.DAT file stores configuration information for the 60 alarms.

HOTKEY.DAT

The HOTKEY.DAT files stores hotkey configuration data.

IOBoard.DAT

The IOBoard.DAT files stores IO Board configuration data.

Installation

For purposes of this manual, it is assumed that The Commander System CCU and optional radio modem has been received through shipment without damage. If there is any indication of damage to the shipping carton or equipment, notify your carrier about the damage before accepting the shipment.

Prepare the Environment

Select a clean, dry area in the vicinity of the radio connection. A table or other flat horizontal surface of approximately 8.5 square feet will be required to accommodate the CCU hardware. Be certain that adequate space is provided surrounding the system for ventilation and unrestricted paper movement to the printer.

Make sure the room is climate controlled. In regards to temperature and humidity, generally speaking, if a person is comfortable in the room where the CCU is located, the CCU will also be comfortable. Likewise, if the room is too warm for a person, the CCU will also be too warm and may in fact not operate correctly. Normally the maximum temperature for the CCU should not exceed 85 degrees Fahrenheit.

Use caution to prevent exposing the CCU components to electrostatic discharge. Do not touch the computer connections, internal parts, or peripheral equipment before first touching a known earth ground.

Make sure adequate power is available within a few feet of the CCU. The Commander System should never be connected to the same power source as heavy machinery or other electrically noisy equipment, such as copiers or coffee pots. The electrical transients generated by these types of equipment can interfere with or possibly damage the sensitive circuitry inside the CCU. It is strongly recommended to power the CCU through a true on-line sine wave UPS (Uninterruptable Power Supply). This type of device ensures that the CCU will always get clean uninterrupted power. When the commercial power goes off, the UPS provides continuous power from its set of batteries until the commercial power is restored. The UPS should large enough to run all the CCU equipment. Refer the specifications for the computer, monitor, printer, modem and radio when selecting an appropriate UPS.

Connect CCU, Printer, Monitor, Keyboard, Mouse, Speakers and Optional MIC

Follow the instructions provided with the computer, printer and MIC to install this equipment. If the PC will run on a network, make the appropriate LAN connection.

Voice Modem Connections

The modem is used to provide automated callouts for alarm events and the capability for remote CCU access over phone line. Follow the instructions provided with the modem for installation. The modem will require a standard 4-wire telephone connection cable with a RJ-11 connector on each end. Connect one end to the telephone line jack provided by the local telephone company. Connect the other end to the "Line" connector on the back of the modem. If an external modem is used, connect the modem to the selected COM port of the computer using a null modem serial cable.

Connect CCU and Optional SS2000D or MODEM-MSK Radio Modem

Connect the radio modem using the included cable from the selected COM port of the computer to the DB9 connector on the SS2000D or the USB port of the MODEM-MSK. Refer to the installation instructions provided with the radio modem for further details. For reference, the RS-232 lines that need to be connected to the SS2000Dare: (1) TX (Transmit), (2) RX (Receive), (3) S.GND (Signal Ground), (4) DTR (Data Terminal Ready). The CCU uses DTR to toggle the radio PTT (Press-To-Talk) line.

Connect the Radio Modem to the Base Radio

Make the SS2000D or MODEM-MSK connections and calibrate the radio system as specified in the associated product manual.

Connect Primary Power

The surge suppression outlet box supplied should be connected to a grounded AC outlet. Plug the CCU equipment and optional radio modem into an outlet box with surge suppression.

Microsoft Windows^{R} Graphical User Interface

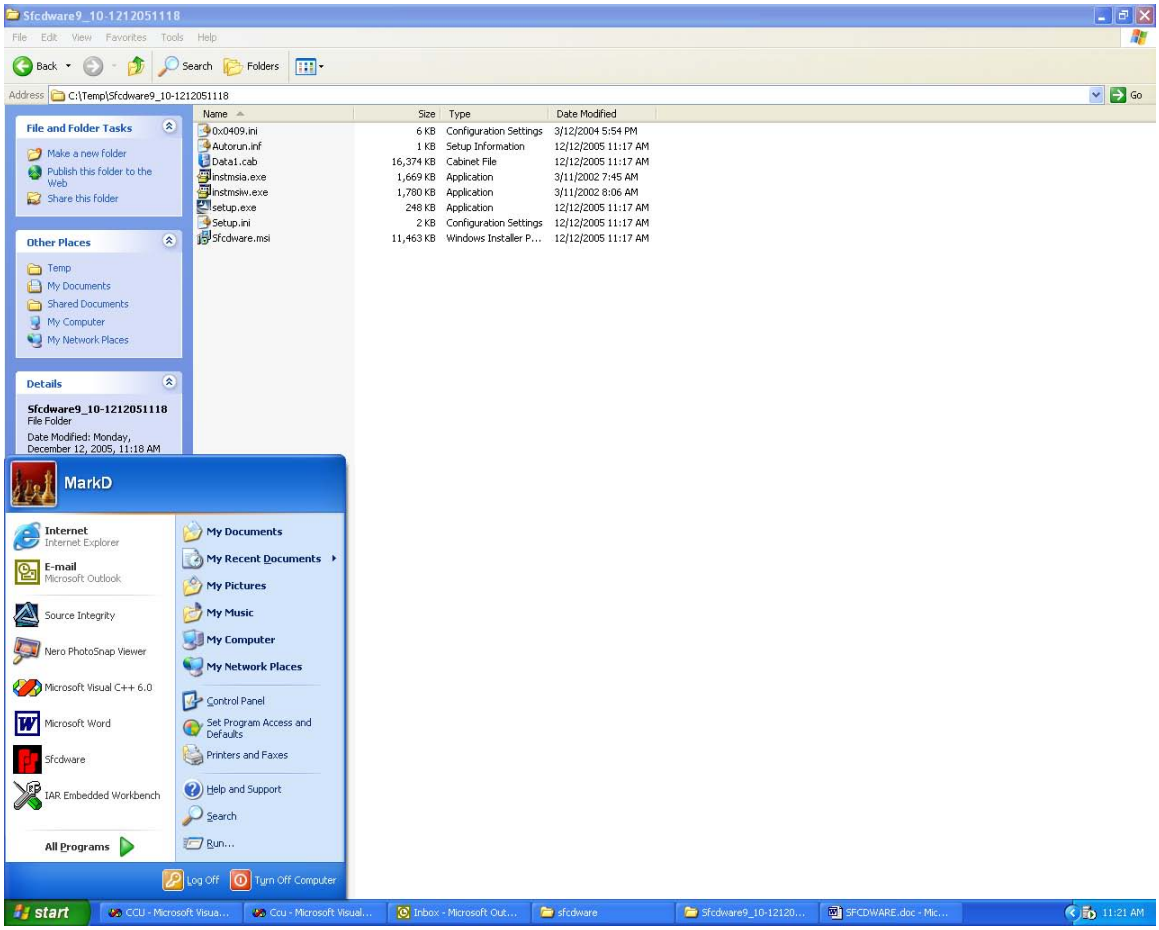
The computer supplied comes with Microsoft Windows preinstalled. Install the latest Windows updates before proceeding with the installation.

The Federal Commander SFCDWARE System Software

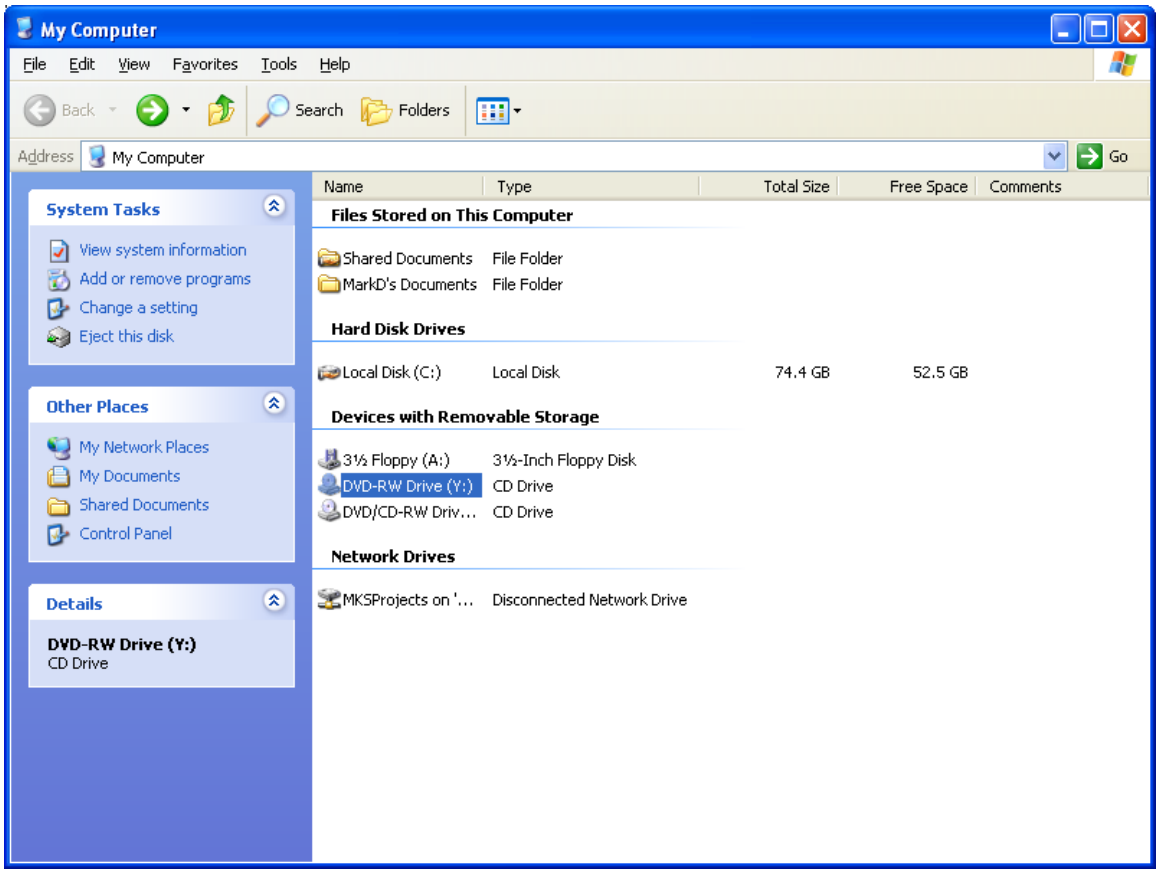
The SFCDWARE System Software is distributed on CD ROM. Follow the steps below to install the SFCDWARE software:

Insert CD ROM into the drive and follow the steps below:

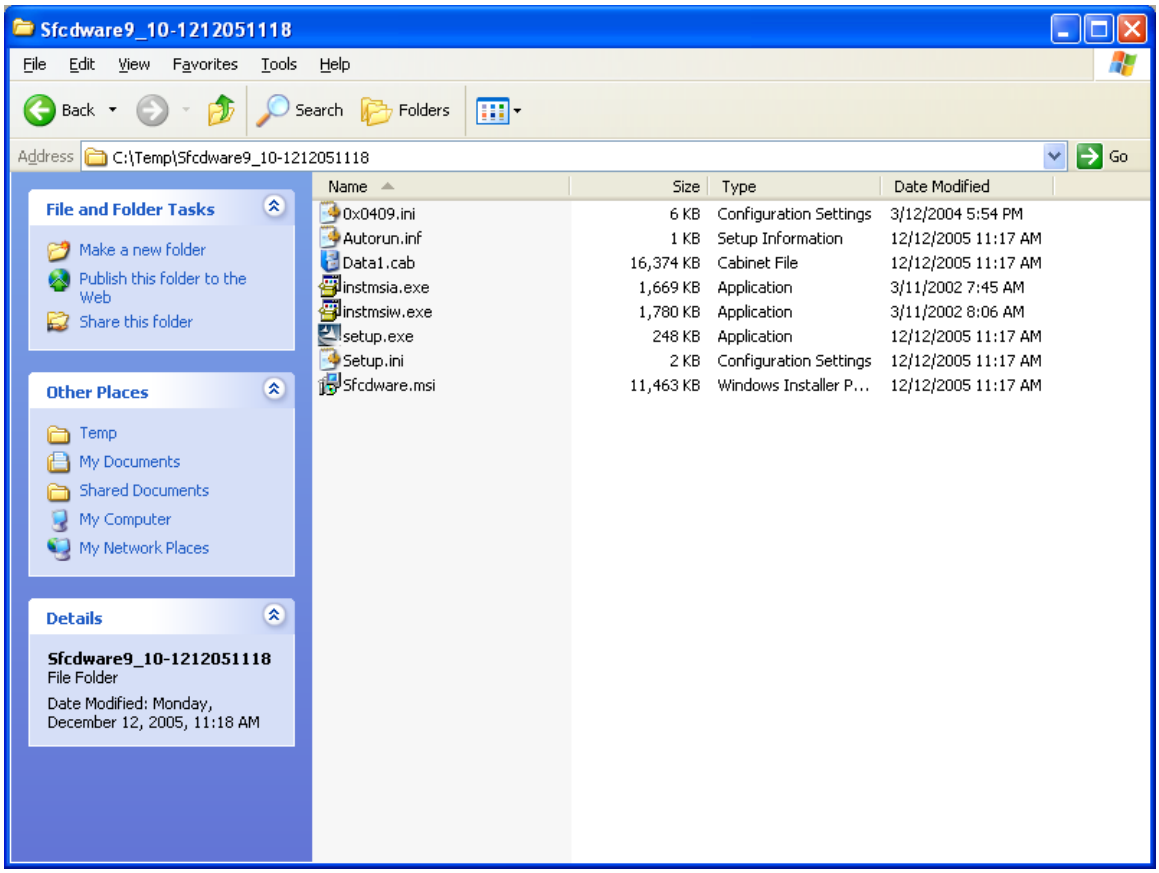
1. Click the Windows start button (lower left corner of screen)



2. Click “My Computer”



3. Click on the CD Drive containing the SFCDWARE installation disk.


Sfcdware9_10-1212051118
File Edit View Favorites Tools Help
Back Search Folders
Address C:\Temp\Sfcdware9_10-1212051118
Go
File and Folder Tasks
Make a new folder
Publish this folder to the Web
Share this folder
Other Places
Temp
My Documents
Shared Documents
My Computer
My Network Places
Details
Sfcdware9_10-1212051118
File Folder
Date Modified: Monday, December 12, 2005, 11:18 AM
Name Size Type Date Modified
0x0409.ini 6 KB Configuration Settings 3/12/2004 5:54 PM
Autorun.inf 1 KB Setup Information 12/12/2005 11:17 AM
Data1.cab 16,374 KB Cabinet File 12/12/2005 11:17 AM
instmsia.exe 1,669 KB Application 3/11/2002 7:45 AM
instmsiw.exe 1,780 KB Application 3/11/2002 8:06 AM
setup.exe 248 KB Application 12/12/2005 11:17 AM
Setup.ini 2 KB Configuration Settings 12/12/2005 11:17 AM
Sfcdware.msi 11,463 KB Windows Installer P... 12/12/2005 11:17 AM

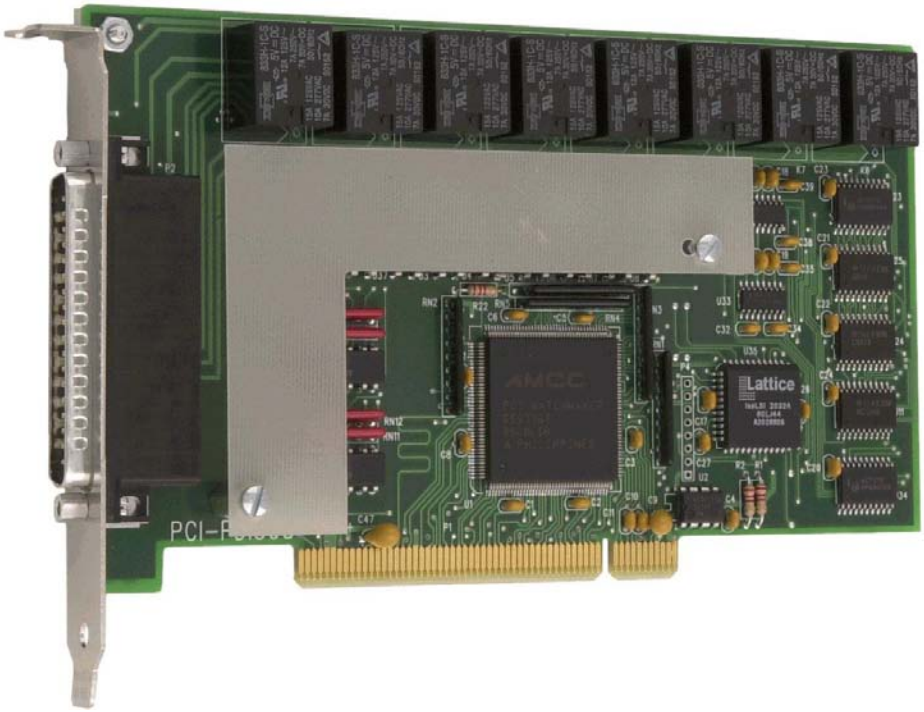
4. Click SFCDWARE.msi. This will launch the automatic installation program. The installation program will prompt the user for information at various stages of the process. If you are not familiar with Windows setup procedures, enter the default option for all prompts. Upon completion, the SFCDWARE software will be installed and a shortcut icon will appear on the Windows Startup Group and All Programs Menu. After successfully installing the software, refer to section three for instructions on running the SFCDWARE program.

IO Board

If your system is equipped with the PCI-PDIS08 IO board the following steps must be performed AFTER the installation of the Commander software.

Installing the hardware

The PCI-PDISO8 board is completely plug-and-play. There are no switches or jumpers to set on the board. Configuration is controlled by your system's BIOS. To install your board, follow the steps below.



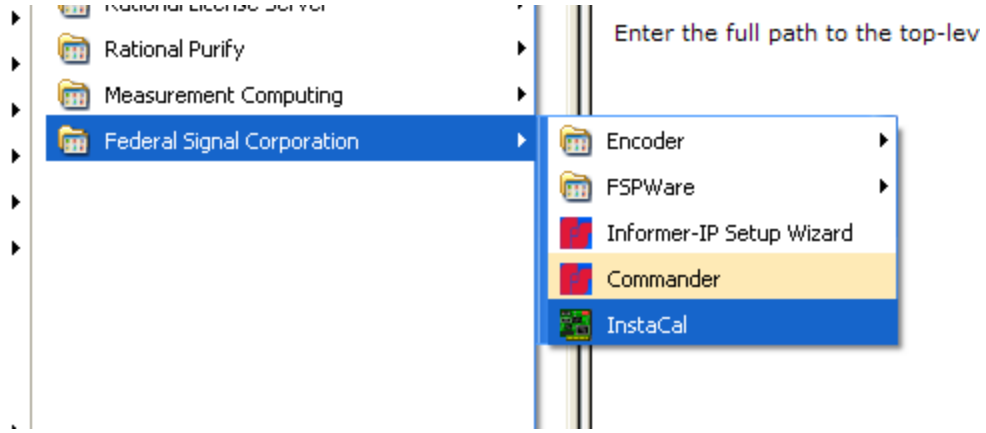
1. Turn your computer off, open it up, and insert your board into an available PCI slot.

2. Close your computer and turn it on.

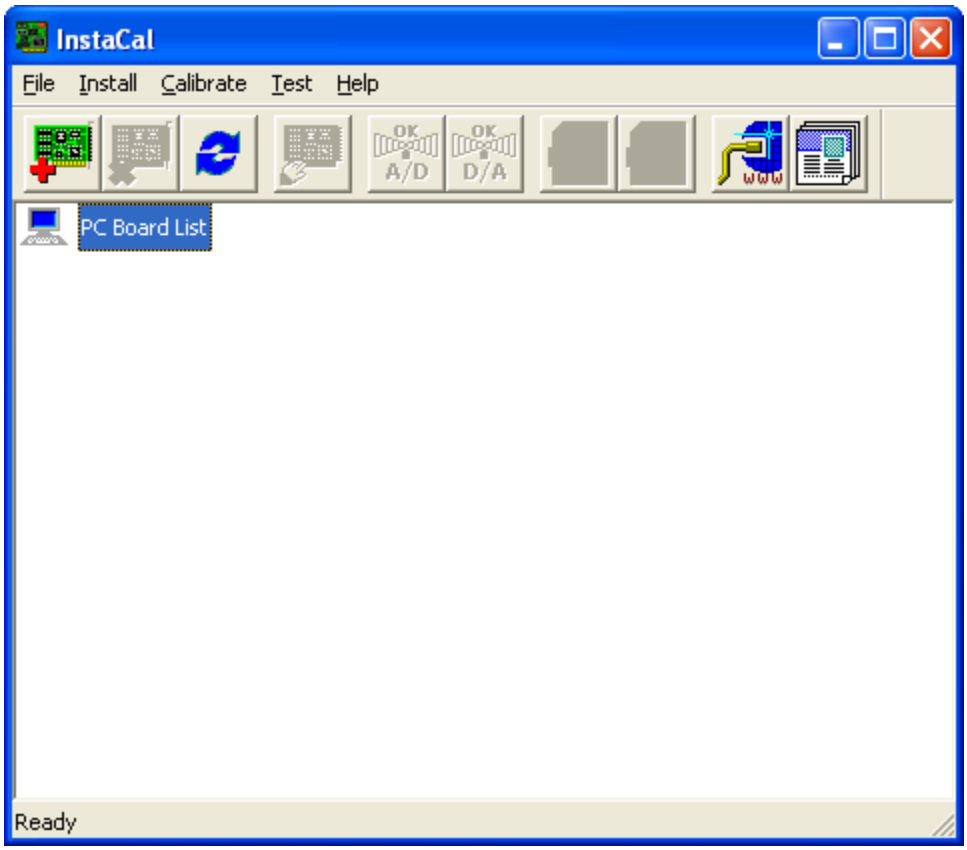
A dialog pops up indicating that new hardware has been detected. Select Automatic Installation and click OK. The system will automatically install the drivers required to operate the IO Board. This may take several minutes.

Run the InstaCal Program

1. Click the Start button
2. Click All Programs
3. Select Federal Signal Corporation and click the InstaCal shortcut:



The InstaCal program will start:



After a few seconds InstaCal will automatically detect your PCI-PDISO8 IO Board and display the following dialog:

Plug and Play Board Detection
The following plug and play devices have been detected...
PCI-PDISO8 (bus# 1, dev# 7)
Check those devices you wish to have added to the configuration file.
OK

Click OK and close the InstaCal program. Your IO Board is not configured and ready to use. It is not necessary to run InstaCal again unless the IO Board hardware is reinstalled.

For making connections to the IO Board reference “Making Connections to the IO Card” section of this document. Digital Inputs and Relay Outputs may be assigned to hotkeys and configured using the IO Board dialog accessed from the System Setup menu.

AT&T Natural Voices Speech Font (Optional)

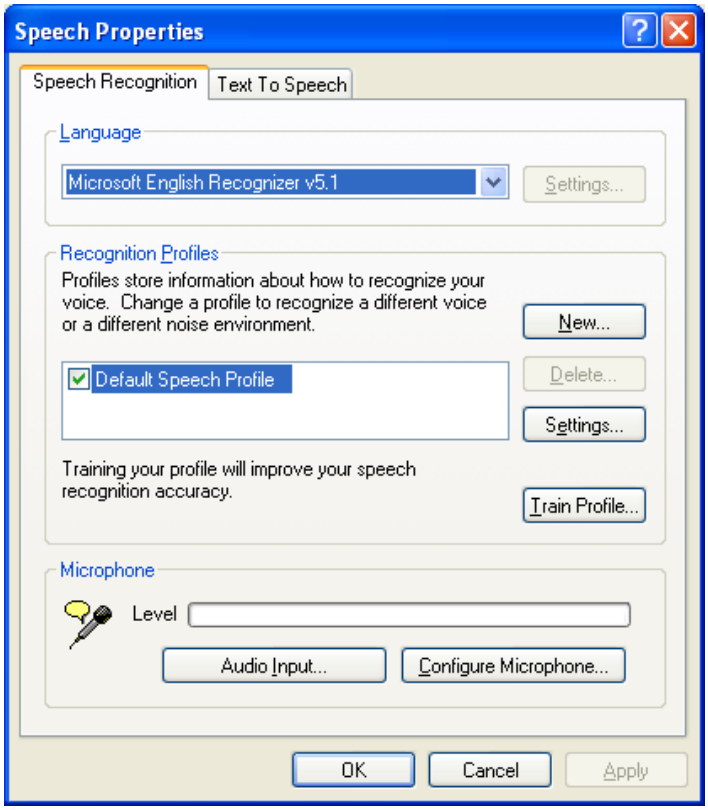
If the system will be using the Text-to-Speech option, the AT&T Natural Voices speech font must be installed.

INTRODUCTION:

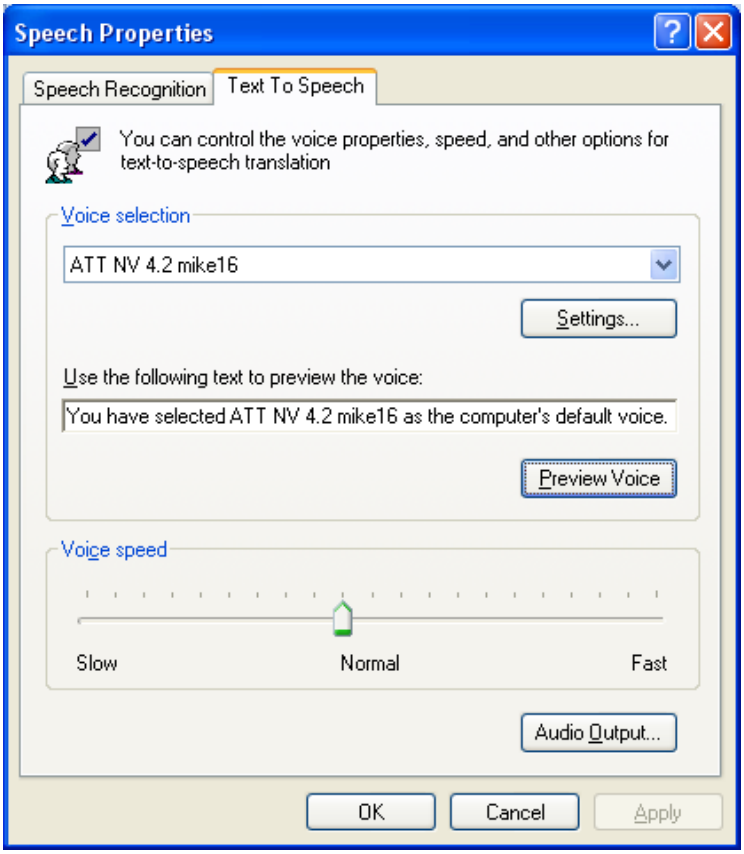
The AT&T Natural Voices software converts text to a high quality natural sounding voice for use with the Federal Commander Mass Alert and Notification software. Mike16 is the default voice provided with the installation. Optionally, a female voice font (Crystal16) may also be used. Contact your local Federal Signal Sales Representative if a female voice font is required for your application.

INSTALLATION:

1. Insert the installation CD into the CD-ROM drive.
2. Click “Start-My Computer” and select the CD ROM.
3. Locate the setup.exe on the CD ROM.
4. Click “Setup.exe” to launch the runtime installation program. Answer all prompts without changing the default settings.
5. After the Runtime installation has successfully completed, bring up the Windows Control Panel and select the “Speech” icon. The following dialog box will appear:



6. Select the “Text To Speech” tab:



7. If not already selected, select “ATT NV 4.2 Mike16” using the drop down list box provided.
8. Verify successful operation by clicking on Preview Voice.
9. This completes the installation of AT&T Natural Voices®.

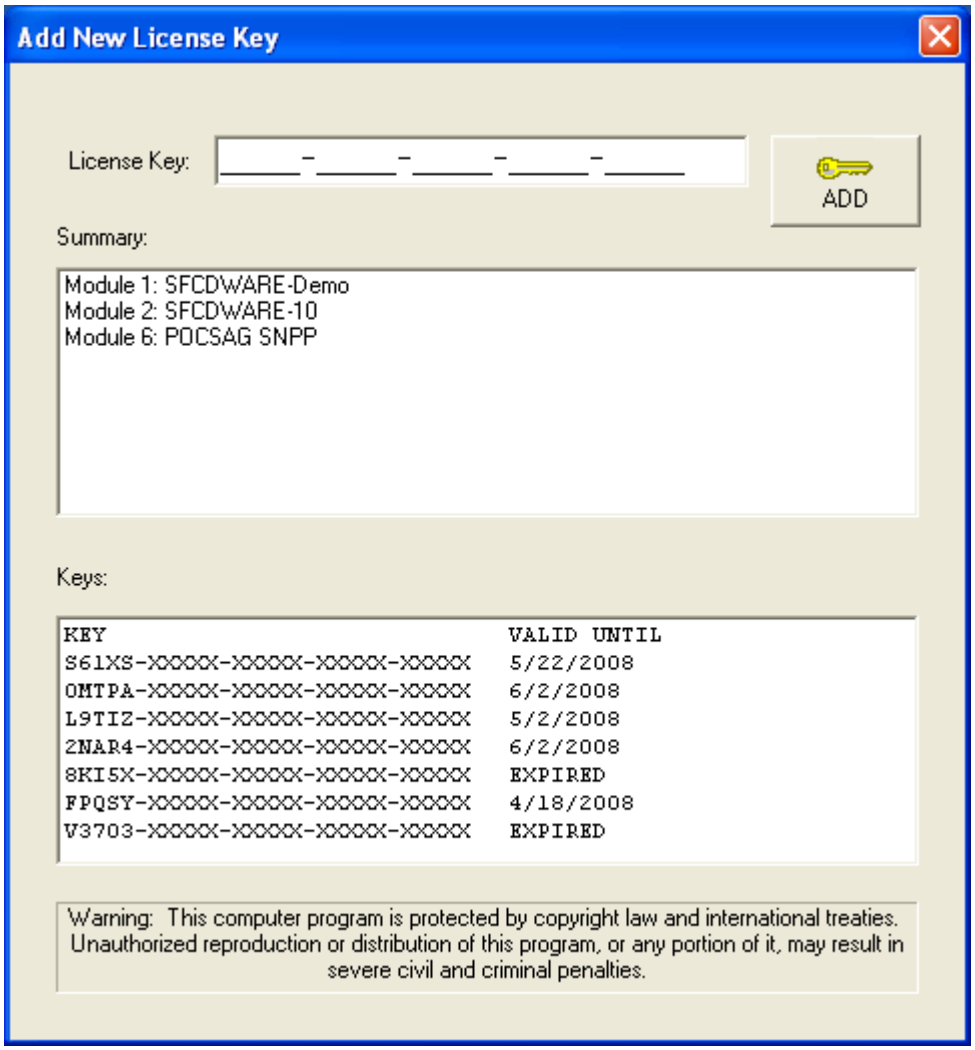
Operator Reference

Starting the SFCDWARE Software

To start the SFCDWARE software, click on the FS icon located on the Windows start menu.

License Key

The first time SFCDWARE is started the Add License Key dialog will be displayed:


Add New License Key
License Key:
ADD
Summary:
Module 1: SFCDWARE-Demo
Module 2: SFCDWARE-10
Module 6: POCSAG SNPP
Keys:
KEY VALID UNTIL
S61XS-XXXXX-XXXXX-XXXXX-XXXXX 5/22/2008
0MTPA-XXXXX-XXXXX-XXXXX-XXXXX 6/2/2008
L9TIZ-XXXXX-XXXXX-XXXXX-XXXXX 5/2/2008
2NAR4-XXXXX-XXXXX-XXXXX-XXXXX 6/2/2008
8KI5X-XXXXX-XXXXX-XXXXX-XXXXX EXPIRED
FPQSY-XXXXX-XXXXX-XXXXX-XXXXX 4/18/2008
V3703-XXXXX-XXXXX-XXXXX-XXXXX EXPIRED
Warning: This computer program is protected by copyright law and international treaties. Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties.

There are two types of keys available for SFCDWARE: 1) Module Keys and 2) User Keys. Module keys enable the number of RTUs (tier level) you are licensed for and enable additional optional features. User keys enable Client connections. SFCDWARE must have at least one

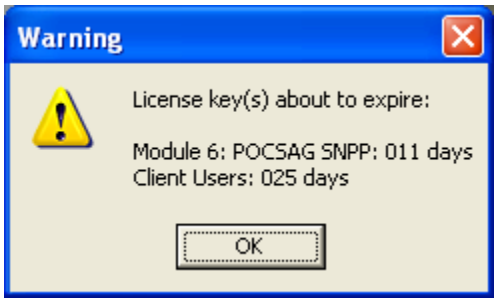
valid tier-level key (module1 – module 5) for the program to be functional. If your system supports client connections you will need at minimum two keys, a module key and a user key.

To add a key type or cut and paste the key into the License Key field and click the ADD button. One or more keys may be added. After adding key(s) click the X in the upper right corner to close the dialog. If after closing the dialog a valid tier-level key is not found, SFCDWARE will close.

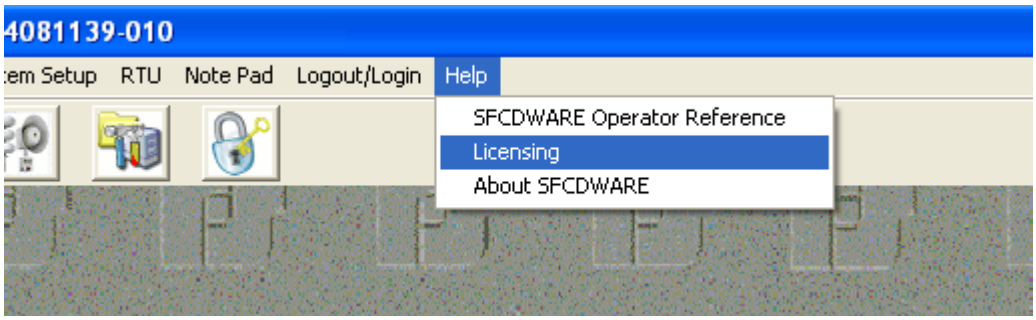
Module Keys

Module 1	SFCDWARE-Demo (support for two RTUs)
Module 2	SFCDWARE-10(support for 10 RTUs)
Module 3	SFCDWARE-25 (support for 25 RTUs)
Module 4	SFCDWARE-255 (support for 255 RTUs)
Module 5	SFCDWARE-511 (support for 511 RTUs)
Module 6	POCSAG encoder SNPP feature
Module 10	Maintenance agreement

License keys may expire depending on your license agreement. Starting 30 days before a license key expires a warning message will popup everyday until the key expires. Contact your Federal Signal sales representative to obtain a new key. *Warning: Your system may be inoperable after the key(s) expire.*



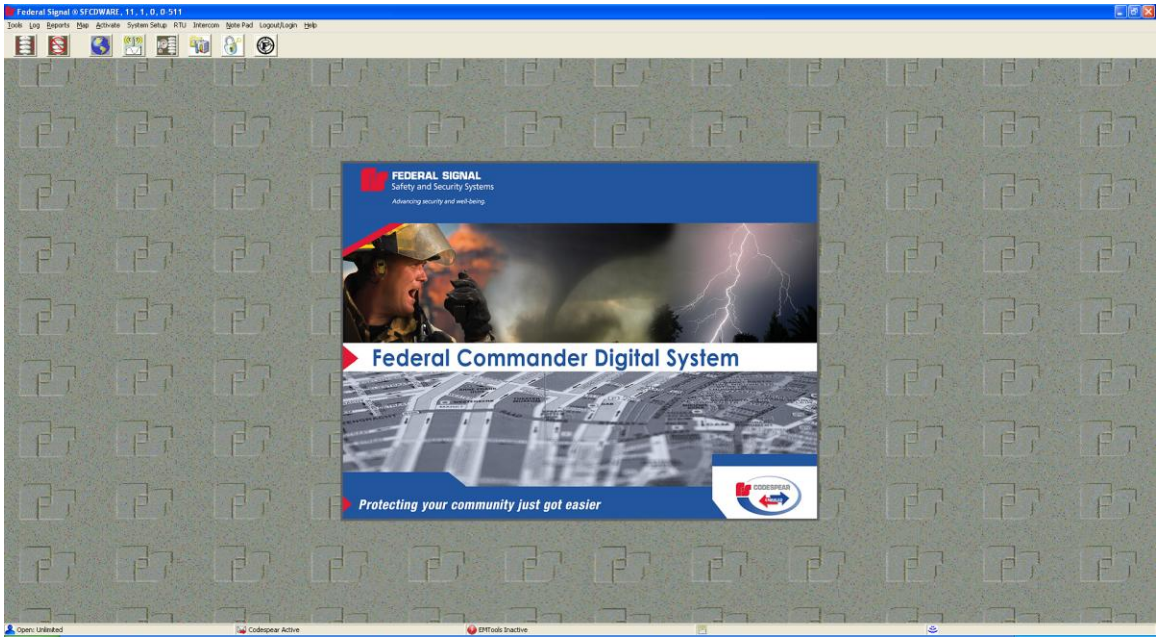
The Add License Key dialog may be accessed at any time by clicking on Licensing from the Help Menu.



Login Screen

If the system is configured for one or more users, the Login screen will appear when the Commander software is started. While the login dialog is displayed, the Commander software will be locked. If the system has no users configured or this is the first time the software has been started, the system will be “Open” and the login screen will not be displayed.

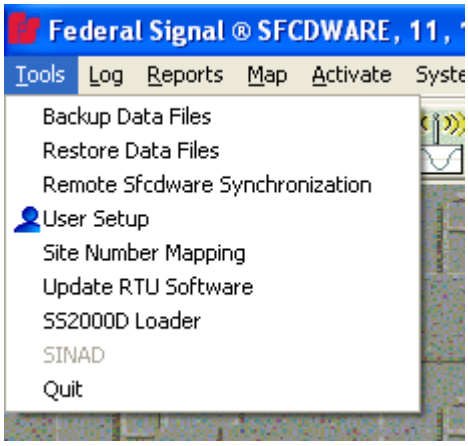
SFCDWARE Main Screen


FEDERAL SIGNAL
Safety and Security Systems
Federal Commander Digital System
Protecting your community just got easier

From this screen the following selections are available:

Tools

This selection will drop down the Tools menu. Tools menu selections are used for restoring or saving backups, setting up users, and various other administrative tasks.



Log

This selection displays the Log drop down menu containing the System Log and Command Log selections.

- System Log: Displays a comprehensive log of all system activity
- Command Log: Displays a log of outgoing and eavesdropped activation commands

The Command Log will automatically be displayed when an activation command from another base station is received.

Reports

This selection will cause the report selection menu to be displayed.

Map

This selection will cause the interactive map screen to be displayed.

Activate

This selection will cause the siren activation hotkey screen to be displayed.

System Setup

This selection will cause the System Setup dialog to be displayed. The System Setup dialog is used to configure system wide parameters.

RTU

This selection will display the RTU dialog. The RTU dialog is used to setup individual RTU parameters and access status information.

Sinad

This selection will pop up the SINAD test dialog box. SINAD test allows the measurement of signal strength between any two RTUs in the system. This selection is not applicable for Codespear enabled systems (Communication Mode = Codespear).

Note Pad

Allow operators to leave and retrieve messages.

Logout/Login

This selection will logout the current user and displays the Login dialog. The system will be “Locked” while the Login dialog is displayed.

Help

This selection will pop up a selection menu that allows access to the SFCDWARE Reference manual, Add License or About dialog.

Toolbar

The following features are accessible from the toolbar by clocking on the associated Icon:

- Activation Screen
- Cancel All
- Send SmartMsg
- Map screen
- Poll All
- RTU
- System Setup
- Logout/Login

Configuration

Before using the control system, the software must be set up at each CCU location. This configuration is typically performed by an FS representative during commissioning of the system. The following parameters require configuration:

System Setup dialog:

- Communication Parameters.
- Number of RTU sites in system.
- Automatic poll times.
- TCP/IP Configuration and Passwords.
- Codespear IP address
- Code Names
- Call List
- Zones
- Map Setup
- Voice Setup
- Sound Setup
- SmartMsg Setup

Configure RTU General Parameters:

- Station Name
- Station Address
- Callout for RTU
- Auto Reporting
- AC Auto Reporting
- Time Encryption
- All Call Repeater #
- Trunking Mode
- Front Porch
- RTU repeater set #1
- RTU repeater set #2
- Voice Callout Alarm

Siren Configuration

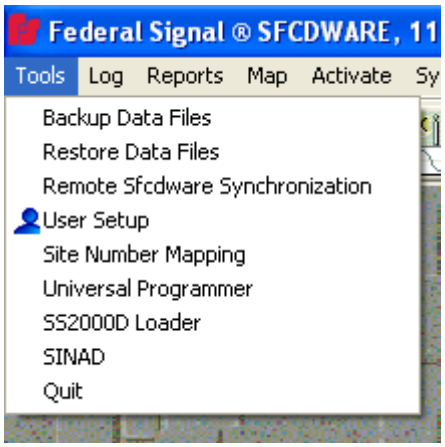
- Unit Type
- Receiver Type
- RF Frequency
- Decode Format

RTU Program

- DTMF Code
- Duotone Code
- EAS Event Code
- Relay Timings (FC)
- Function List (MCP and UV)

Tools Menu

Selecting the Tools menu item will display the following pull down menu:

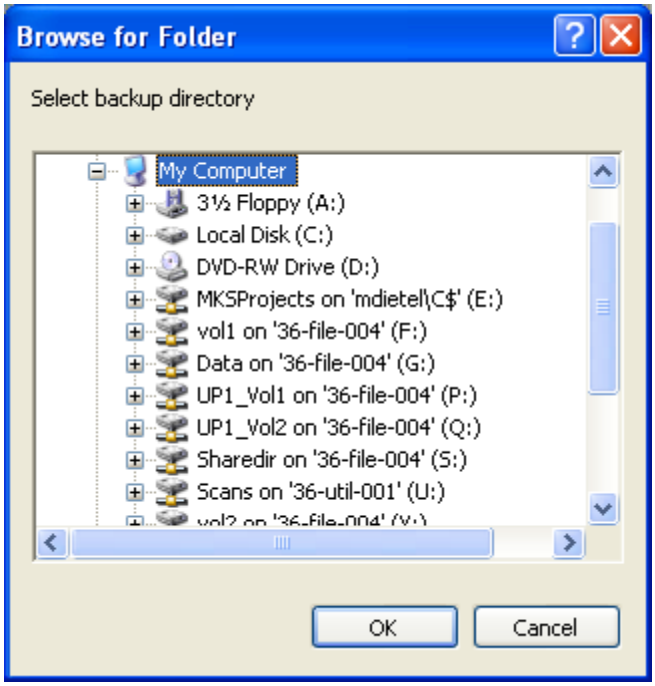


File Menu Item Selections:

- Backup Data Files
- Restore Data Files
- Remote SFCDWARE Synchronization
- User Setup
- Site Number Mapping
- Universal Programmer
- SS2000D Loader
- SINAD
- Quit

Backup Data Files

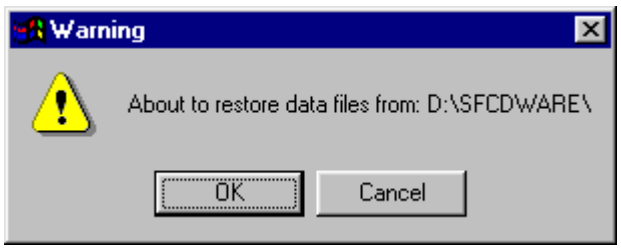
This selection will backup all system configuration and data base files to the selected directory. Federal Signal recommends that data files be periodically backed up to facilitate easy restoration in the event of a system crash or corruption. The following Windows browse window will appear:



Select the desired destination directory (this should be different than your current SFCDWARE installation directory) and click OK. The backup process will begin and complete automatically.

Restore Data Files

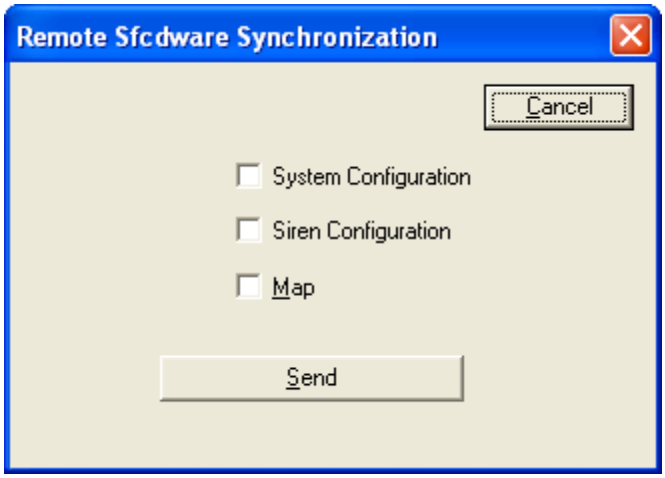
This option will restore data files from a previous backup. Select the location of the backup directory using browse window that pops up and click OK. The following warning message will appear:



Click OK to proceed with restoration or Cancel to abort. *Warning: Restoring Data files will overwrite your existing configuration and database.*

Remote SFCDWARE Synchronization

Remote SFCDWARE synchronization is only available when Communication Mode is set to Codespear. Remote SFCDWARE Synchronization allows all other instances of SFCDWARE on the Codespear network to be synchronized or cloned. The following dialog will popup after making this menu selection:



System Configuration

Synchronize system parameters (base.dat). All system parameters will be cloned with the exception of the following:

- Unit ID number.
- All parameters on the “SmartMsg Setup” screen.

Siren Configuration

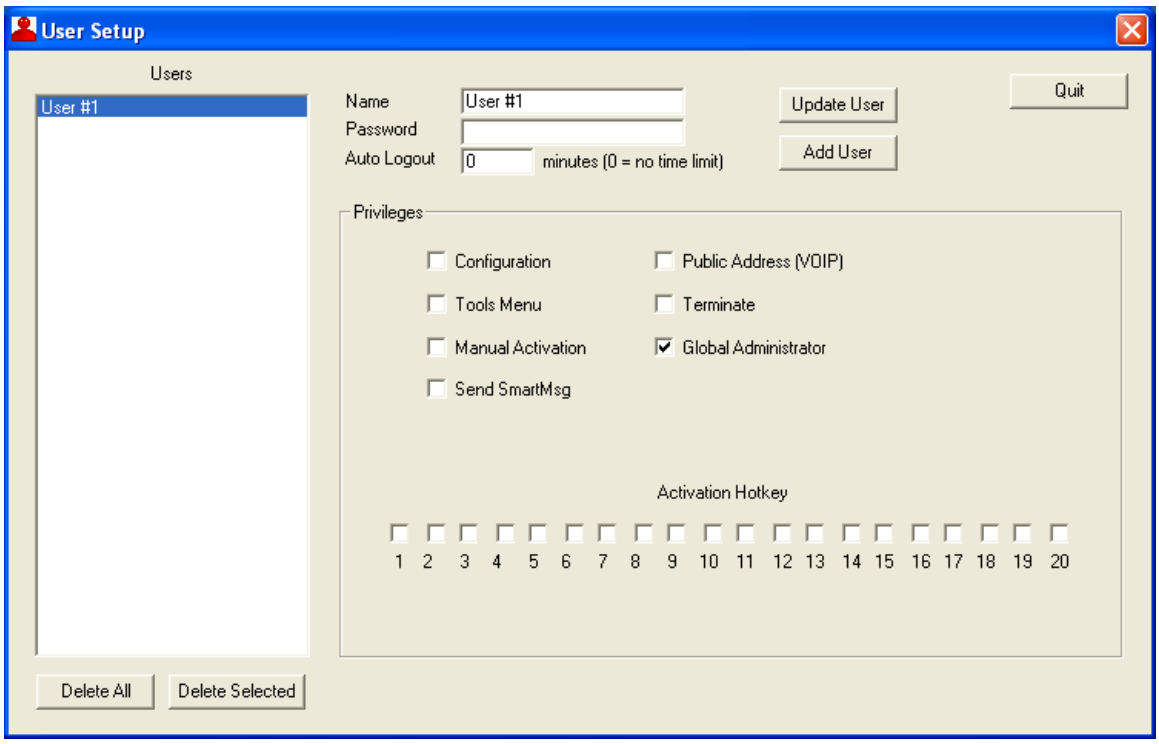
Synchronize all siren configuration parameters.

Map

Send all map screen bitmap files to remote instances of SFCDWARE.

User Setup

The User Setup dialog allows users with “System Administrator” privileges to configure users:



Add User

To add a new user:

1. Enter Name, Password and Auto Logout time in the respective fields
2. Assign privileges
3. Click the “Add User” button

The new user will be added to the Users list on the right. The new user will have access to the privileges assigned to her. Optionally a new user may be added by selecting an existing user, editing the desired fields and clicking Add User.

The number of users that may be configured is unlimited.

Auto Logout

The user will automatically be logged out after the specified number of minutes. To disable auto logout, leave this field blank or set to zero.

Privileges

- Configuration: Access to configuration and setup screens.

- Tool Menu: Access to Tool menu items, with the exception of User Setup
- Manual Activation: All non-Hotkey activation
- Send SmartMsg: Access to the manual Send SmartMsg function
- Public Address (VOIP): Access to the Public Address (VOIP) hotkey button
- Terminate: Ability to terminate the Commander software
- Global Administrator: Full privileges, all other privileges are ignored if this is selected
- Activation Hotkey: Selects which hotkeys are available to this user

Update User

To update an existing user perform the following steps:

1. Select a user in the list
2. Update desired fields and privileges
3. Click “Update User’

Note: All user names must be unique. Users are not automatically saved or updated when switching users or closing the User Setup dialog.

Delete Selected User

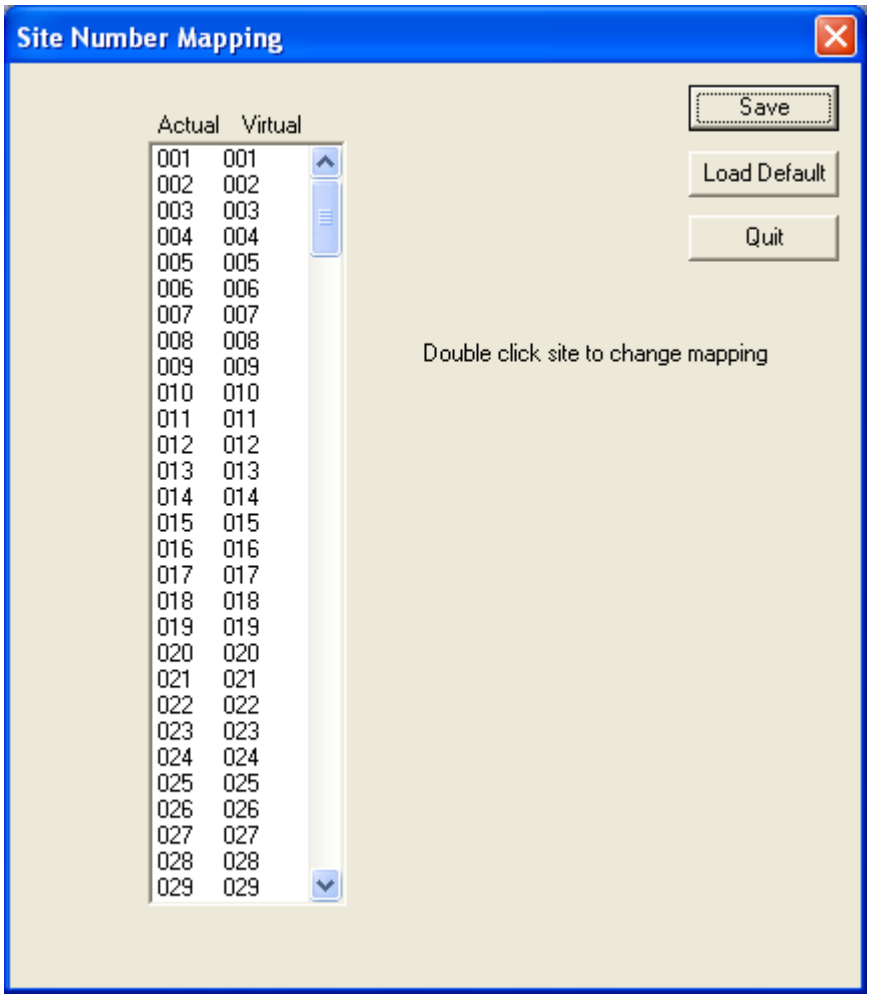
This button deletes the currently selected user in the user list.

Delete All Users

This button deletes all users. *Caution: A system with no users is “Open”, allowing Global Administrator privileges to everyone.*

Site Number Mapping

Site number mapping is used to assign a virtual mapping label to actual RTU site numbers. This label will appear as the site number throughout the SFCDWARE program. The Actual site number is the number corresponding with the site number set with dip switches on the siren control board. The user can assign any number from "001" to "899" to any of the 255 Actual numbers. Each site must have a unique virtual site number. The "Load Default" Button assigns virtual numbers that correspond to the actual site number.



Save

Saves the mapping as displayed in table.

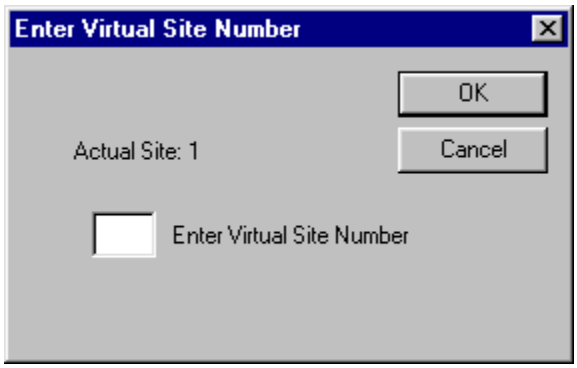
Default Map

Loads default mapping. Virtual site number equals Actual site number.

Quit

Quits the dialog without saving. Note: All changes will be lost and system will revert to existing mapping.

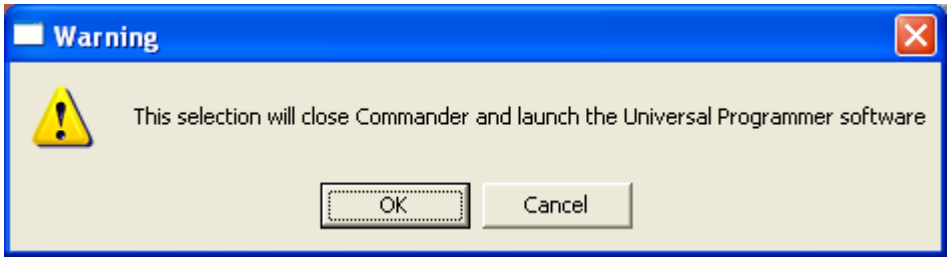
To change the mapping of a site, double click the site entry in the table. The following dialog will pop up:



Enter the desired virtual site number in the box provided and click **OK**. The table entry will now display the new value. Note: Changes to the mapping will not take effect until the **Save** button is pressed.

Universal Programmer

This selection is used for updating the operating system software and security features of the RTUs and *should be used only by authorized personal under the direction of Federal Signal Corporation*. Clicking this selection the following dialog will appear:



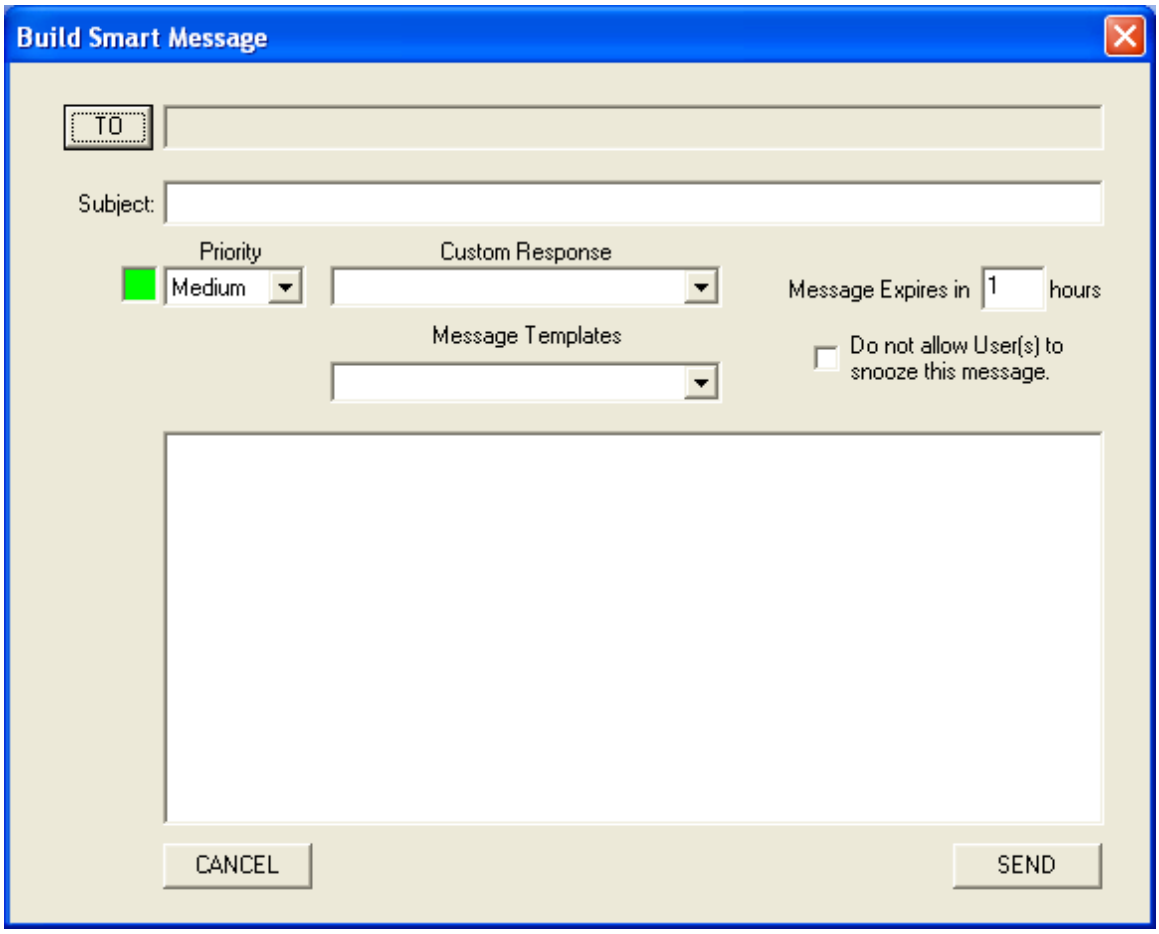
Click OK to close SFCDWARE and launch the Universal Programmer software.

SS2000D Loader

This selection launches the SS2000D Loader program. The SS2000D Loader program allows the ability to configure the SS2000D, including the programming of Function Buttons and other programmable parameters. Note: Incorrect programming of the SS2000D could render the system inoperable. This selection should only be used by authorized personal with prior training or as directed by Federal Signal Corporation.

SmartMsg

This selection is used to manually build and send a SmartMsg. The Build Smart Message dialog will be displayed:



TO

Message recipients can be selected by clicking the TO button and selecting recipients from the object selection form that appears.

Subject

Enter subject of this message in the Subject textbox.

Priority

The three message priority levels are High, Medium and Low. Each message is assigned one of these priorities.

Custom Response

Standard messages require a simple acknowledgement via an OK button. When a custom response is added to a message, the recipient is required to answer questions or provide more information to acknowledge a message.

Message Templates

Message Templates allows the selection of a previously saved message configuration. When a Message Template is selected, no other options are required as they are preconfigured within the template.

Message Expiration

Each message is assigned a time to expire.

- It is no longer delivered to any recipients.
- It is moved to the expired area of the database.
- It can be archived from the system by a Global Administrator.

Snooze Option

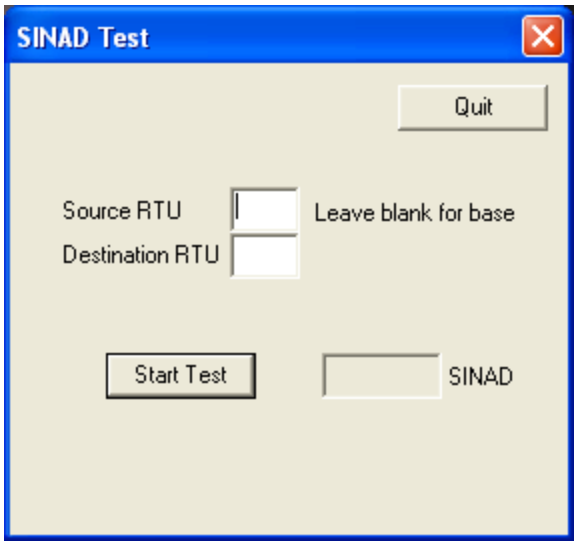
A snooze option is available which allows recipients to delay acknowledging the message. This feature is available by default. The user can click the "Snooze" button on the pop-up alert that appears on computer desktops to minimize the message for a short period of time. This allows a user to delay reading the SmartMsg message while finishing current tasks at hand. The message will then reappear on top of all other applications again after the user's set snooze interval. (The user's Message Snooze interval can be set between 30 seconds and 128 minutes. It is set via Settings—Profile in the SmartMsg Client). For messages that are immediately critical, a sender can choose to disable the snooze option.

Body

Type the body of the message in the large textbox provided.

SINAD

The SINAD menu selection allows the measurement of SINAD (Signal Noise and Distortion) between any two RTUS in the system. Clicking SINAD on the Tools menu will display the SINAD dialog:



Source RTU

Enter the source RTU site here. The source site is the transmitting site during SINAD measurement.

Destination RTU

Enter in the destination RTU site here. The destination site is the receiving site during SINAD measurement. Leave this field blank if the source site is the local base station.

Start Test

Click on this button to start the test. The source site will transmit a tone to the destination site for eight seconds. At the conclusion of the test the SINAD value will appear in the SINAD list box.

SINAD

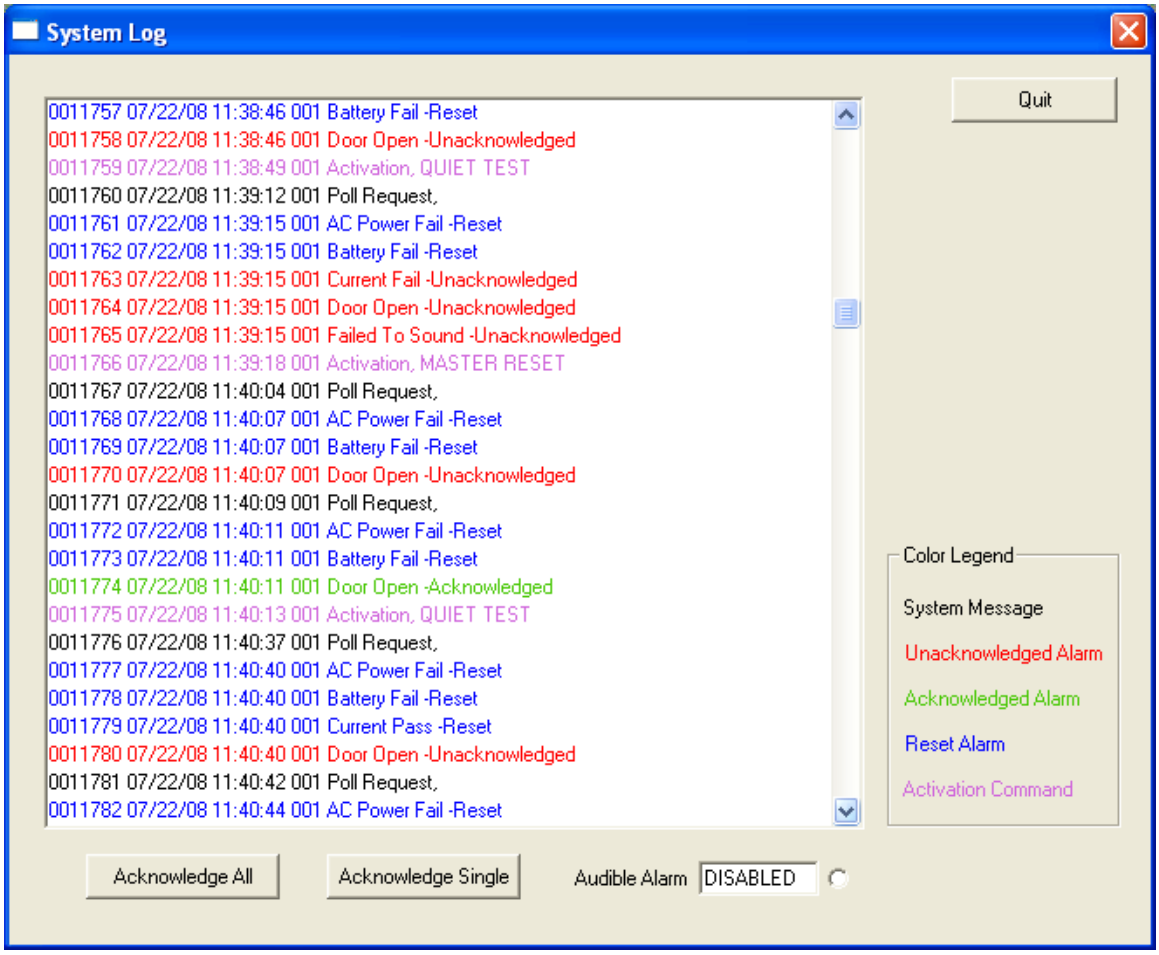
At the conclusion of the test, the result will display here.

Quit

Terminates the SFCDWARE Digital Commander software. You will be prompted for the Level2 password, if required.

System Log

After selecting System Log from the SFCDWARE System window, the following screen is displayed.


System Log
Quit
0011757 07/22/08 11:38:46 001 Battery Fail -Reset
0011758 07/22/08 11:38:46 001 Door Open -Unacknowledged
0011759 07/22/08 11:38:49 001 Activation, QUIET TEST
0011760 07/22/08 11:39:12 001 Poll Request,
0011761 07/22/08 11:39:15 001 AC Power Fail -Reset
0011762 07/22/08 11:39:15 001 Battery Fail -Reset
0011763 07/22/08 11:39:15 001 Current Fail -Unacknowledged
0011764 07/22/08 11:39:15 001 Door Open -Unacknowledged
0011765 07/22/08 11:39:15 001 Failed To Sound -Unacknowledged
0011766 07/22/08 11:39:18 001 Activation, MASTER RESET
0011767 07/22/08 11:40:04 001 Poll Request,
0011768 07/22/08 11:40:07 001 AC Power Fail -Reset
0011769 07/22/08 11:40:07 001 Battery Fail -Reset
0011770 07/22/08 11:40:07 001 Door Open -Unacknowledged
0011771 07/22/08 11:40:09 001 Poll Request,
0011772 07/22/08 11:40:11 001 AC Power Fail -Reset
0011773 07/22/08 11:40:11 001 Battery Fail -Reset
0011774 07/22/08 11:40:11 001 Door Open -Acknowledged
0011775 07/22/08 11:40:13 001 Activation, QUIET TEST
0011776 07/22/08 11:40:37 001 Poll Request,
0011777 07/22/08 11:40:40 001 AC Power Fail -Reset
0011778 07/22/08 11:40:40 001 Battery Fail -Reset
0011779 07/22/08 11:40:40 001 Current Pass -Reset
0011780 07/22/08 11:40:40 001 Door Open -Unacknowledged
0011781 07/22/08 11:40:42 001 Poll Request,
0011782 07/22/08 11:40:44 001 AC Power Fail -Reset
Color Legend
System Message
Unacknowledged Alarm
Acknowledged Alarm
Reset Alarm
Activation Command
Acknowledge All
Acknowledge Single
Audible Alarm
DISABLED

The system log screen displays the most recent system activity. The above screen contains sample data. When the amount of entries totals 2000, the system log will be purged to 1000 messages. Older data may be displayed using the System Log Report function.

Acknowledge Single Alarm (Acknowledge Single)

To acknowledge any single alarm, first highlight the alarm that is to be acknowledged. To highlight a single alarm, point & click anywhere on the line that contains the alarm.

Once the desired alarm has been highlighted, point & click on the 'Acknowledge Single' radio button. The selected alarm will then be redisplayed with 'ACKNOWLEDGED' displayed as the new alarm status.

Acknowledge ALL Alarms (Acknowledge All)

To acknowledge all unacknowledged alarms at one time, point & click on the "Acknowledge ALL" radio button. The system log will be redisplayed after all unacknowledged alarms have been

acknowledged.

Acknowledging an alarm will prevent the alarm entry from causing a voice call out.

Quit

This selection will cause the System Log screen to terminate.

Message Line Description

From left to right, the entry number, date, time, RTU number, description, and status.

Entry Number

The entry number is a seven digit number that is automatically assigned to each message in the system log. Entry numbers are assigned sequentially as alarm and status messages are received by the CCU.

Date

The date format is MM/DD/YY. For an unsolicited transmission from an RTU, this date will be the date that the event occurred at the RTU.

For all other system log messages, this date will be the CCU date at the time the event occurred.

Time

The time format is HH:MM:SS. For an unsolicited event from an RTU, this time will be the time that the alarm condition occurred at the RTU.

For all other system log messages, this time will be the CCU time at the time the event occurred.

RTU Number

This three digit number describes the RTU location at which the event occurred. Virtual RTU site numbers are used as defined by the RTU site number mapping. “All” indicates an all-call event and “Znn” indicates a Zone event.

Description

Contains a text description of the event that is being reported. Eavesdropped messages from remote base stations will display the base station address following the message description.

Status

The message status can be one of three possible levels:

Acknowledged:	Acknowledged by a user
Unacknowledged:	Not acknowledged
Reset:	Fault condition no longer exists

Acknowledging an alarm will prevent the respective alarm from causing a voice call-out (notification by telephone).

Scrolling Through Alarm Messages

Use the standard Windows scroll bar on the left side of the system log to scroll through messages.

Clicking on any message and using the Page Up, Page Down and arrow keys may also accomplish scrolling.

Audible Alarm (ENABLED / DISABLED)

This selection controls the audible alarm at the CCU location.

If Audible Alarm is ENABLED, the audible alarm will sound at the CCU whenever any unacknowledged message is in the System Log. When all messages have been acknowledged or reset the audible alarm will turn off.

To enable or disable the Audible Alarm, point & click on the Audible Alarm radio button.

Color Status

The multicolored system log provides color coded status information:

- BLACK System Message
- BLUE Reset Alarm
- RED Unacknowledged Alarm
- GREEN Acknowledged Alarm

Interpreting the System Log Data

If the same system message is repeated more than once, this usually means that the CCU could hear the message from the RTU that sent it, but the RTU could not hear the ACK from the CCU. Since the RTU may try up to ten times to send a message to the CCU, there could be as many as ten occurrences of the same exact message, each with a different alarm number.

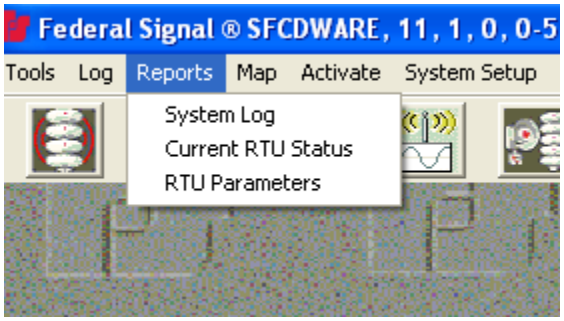
SOLUTION: Resolve the communication problem between the CCU and respective RTU. Try configuring the CCU to use one or more repeaters to reach the RTU that is having trouble hearing the base or change the antenna or radio power at the site.

Comm Fail messages are generated by the CCU whenever the CCU has attempted to contact an RTU and all the retries have failed. If this happens only rarely to a particular RTU, it usually means there was some sort of interference at the time the CCU and RTU tried to talk with each other. The condition usually goes away in a few minutes. If any RTU has consistent Comm Fail messages, this usually means that the radio path between the CCU and the RTU is either blocked by some object or is out of range for the RTU.

SOLUTION: Try configuring the CCU to use one or more repeaters to reach the RTU that is having trouble hearing the base or change the antenna or radio power at the site.

Reports

After selecting Reports from the SFCDWARE System window, the following screen is displayed.



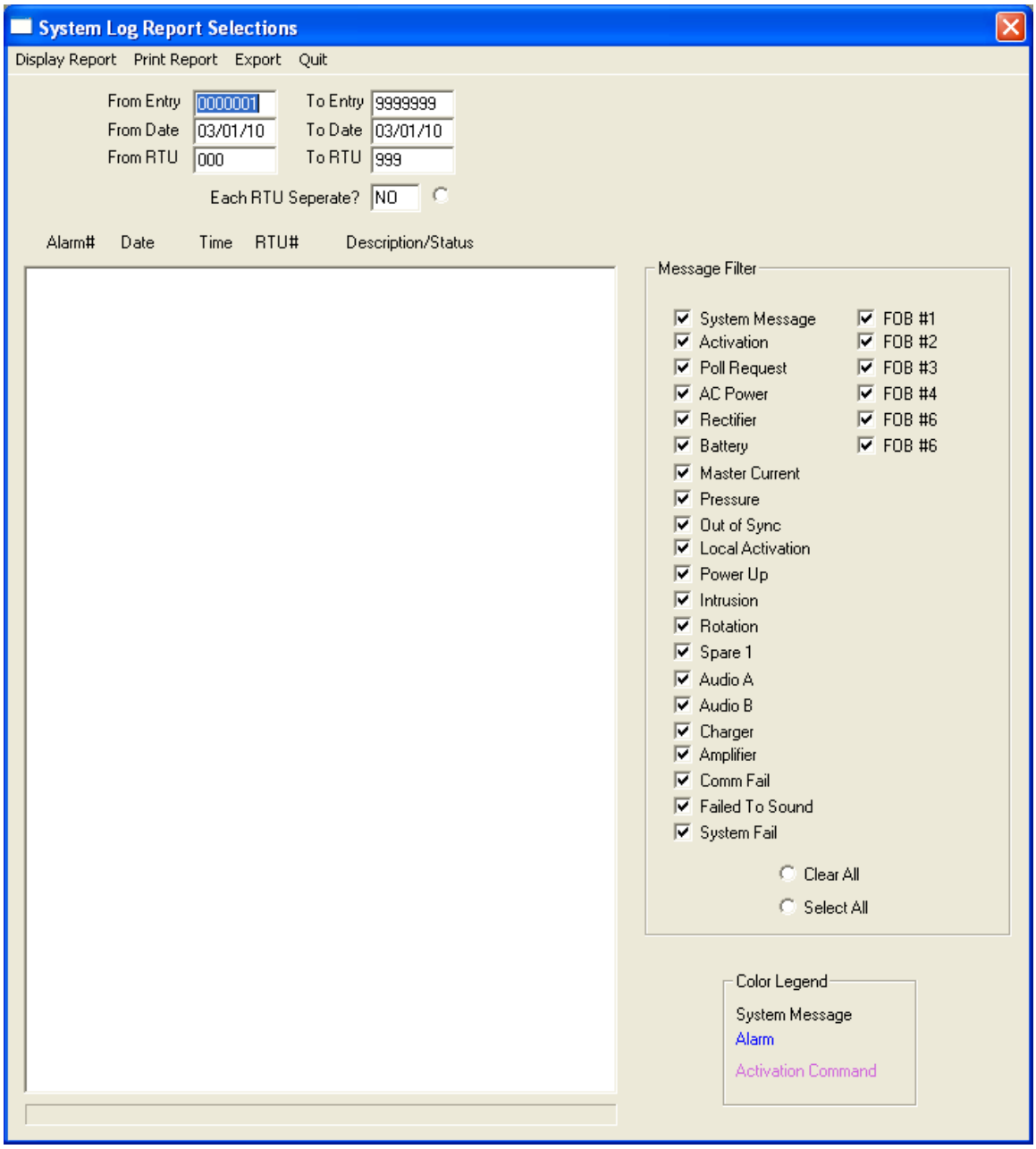
Three Report Selections are available:

- System Log -- Prints system log entries for selected RTUs.
- RTU Status Report -- Current status and sensor conditions of selected RTUs.
- RTU Parameters -- Prints configuration data for all RTUs in the system.

System Log

Prints system log entries for selected RTUs

After selecting “System Log", the following screen will be displayed:



AVAILABLE RADIO BUTTON SELECTIONS

Display Report

After all report options have been entered, select this radio button to display the report on the screen.

Print Report

After all report options have been entered, select this radio button to begin printing the report.

Export

This function will create a tab delimited text file for use with database programs such as Microsoft® Excel. A Windows Browse dialog will pop up for path and file name selection.

Quit

Select this radio button to quit the Alarm Report Selections screen.

Report Format

The report is formatted to provide the Alarm entry No., Time & Date of Alarm, RTU address(000 = system address, 900-909 = the base station address, ALL = All Call address, and Z01-Z16 = the zone address), and the Alarm Description.

From Entry

The format of this data entry field is seven digits. To enter number 1, enter "0000001". Leading zeros are required. To change From Entry, highlight the current number, and then enter a new number. Only messages that have a number that is equal to or greater than From Alarm will be included on this report.

To Entry

The format of this data entry field is seven digits. To enter number 6387, enter "0006387". Leading zeros are required. To change To Entry, highlight the current number, and then enter a new number. Only messages that have a number that is equal to or less than To Entry will be included on this report.

From Date

The format of this data entry field is MM/DD/YY. To enter the date of January 10th 2002, enter "01/10/02". Leading zeros and slashes are required. To change From Date, highlight the current date, and then enter a new date.

Only alarm messages that have a date that is on or after the From Date will be included on this report.

To Date

The format of this data entry field is MM/DD/YY. To enter the date of December 31st 2002, enter "12/31/02". Leading zeros and slashes are required. To change the To Date, highlight the current date, and then enter a new date.

Only alarm messages that have a date that is on or before the To Date will be included on this report.

From RTU

The format of this data entry field is three digits. To enter an RTU number of one, enter "001". Leading zeros are required. To change From RTU, highlight the current RTU number, and then enter a new number.

Only alarm messages that have an RTU number that is equal to or greater than From RTU will be included on this report.

To RTU

The format of this data entry field is three digits. To enter an RTU number of one, enter "001". Leading zeros are required. To change To RTU, highlight the current RTU number, and then enter a new number.

Only alarm messages that have an RTU number that is equal to or less than To RTU will be included on this report. All Call and Zone commands "ALL" and "Z01-Z16" are included by default.

Each RTU Separate (Yes / No)

This selection controls how the alarm messages are grouped together. To change the selection, point & click on the radio.

If **YES** is selected, all alarms will be grouped together by RTU number. Within this group the alarm messages will be in chronological order.

If **NO** is selected, all alarms will be printed in chronological order regardless of the RTU number.

Message Filter

The message filter determines which type of messages will be included in the report. A check mark indicates the respective message type will be included in the report. The absence of a check mark indicates the respective message type will not be included in the report.

Note: For Activation Log reports, the Message Filter is grayed out. If other message types are desired, select System Log report instead of Activation Log.

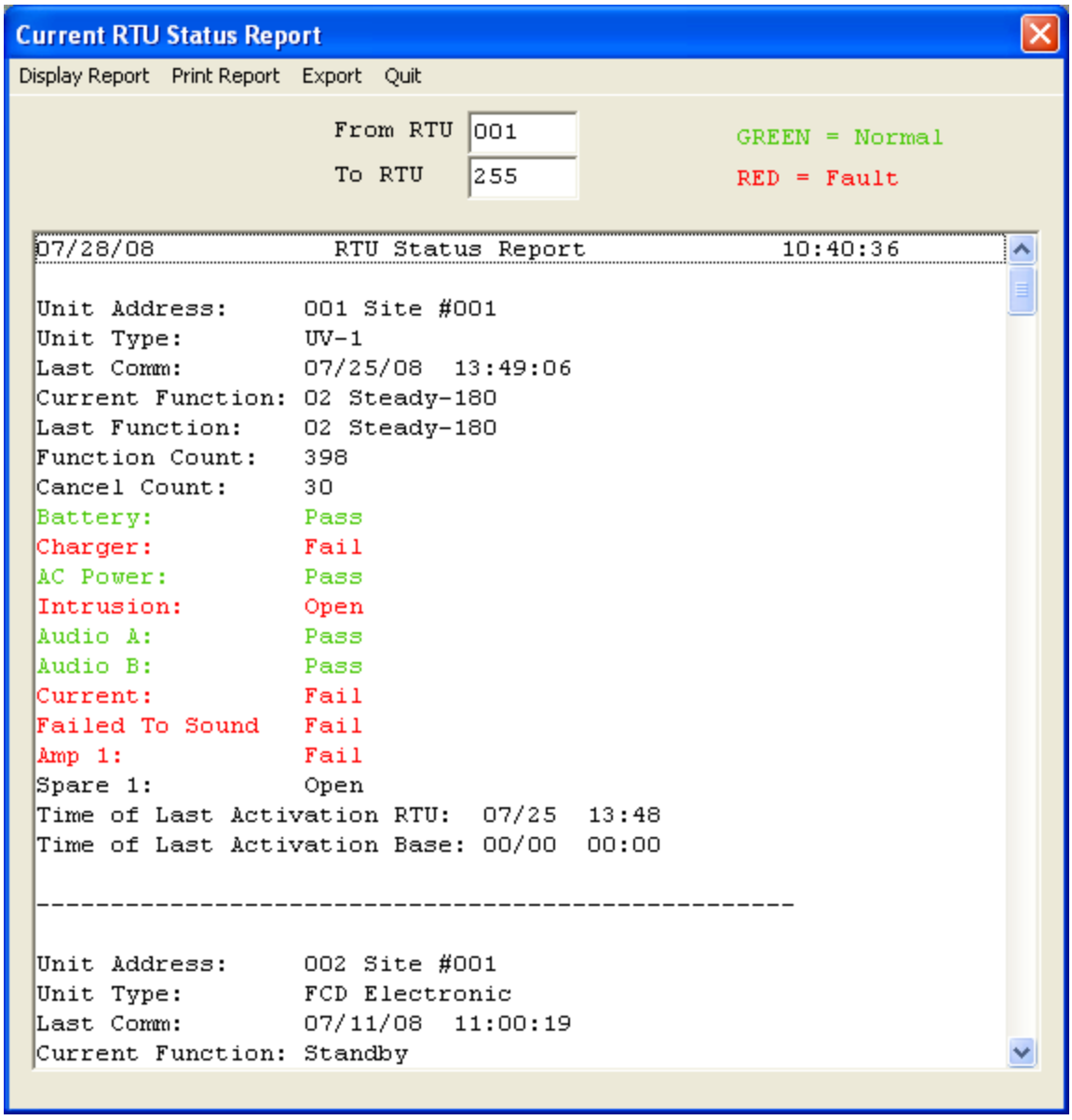
Color Status

The multicolored system log provides color coded status information:

- BLACK System Message
- BLUE Reset Alarm
- RED Unacknowledged Alarm
- GREEN Acknowledged Alarm

RTU Status

Prints or displays the current status and sensor conditions of selected RTUs. *Note: Current RTU status represents the conditions of the RTU at the time of the last poll response.*



AVAILABLE RADIO BUTTON SELECTIONS

Display Report

Select this radio button to display the report on the screen.

Print Report

Select this radio button to begin printing the report.

Export

Select this option to create a color RTF file of the report. Microsoft Word, Wordpad or other RTF compatible word processor may be used to view RTF files. A Windows Browse dialog will pop up for path and file name selection.

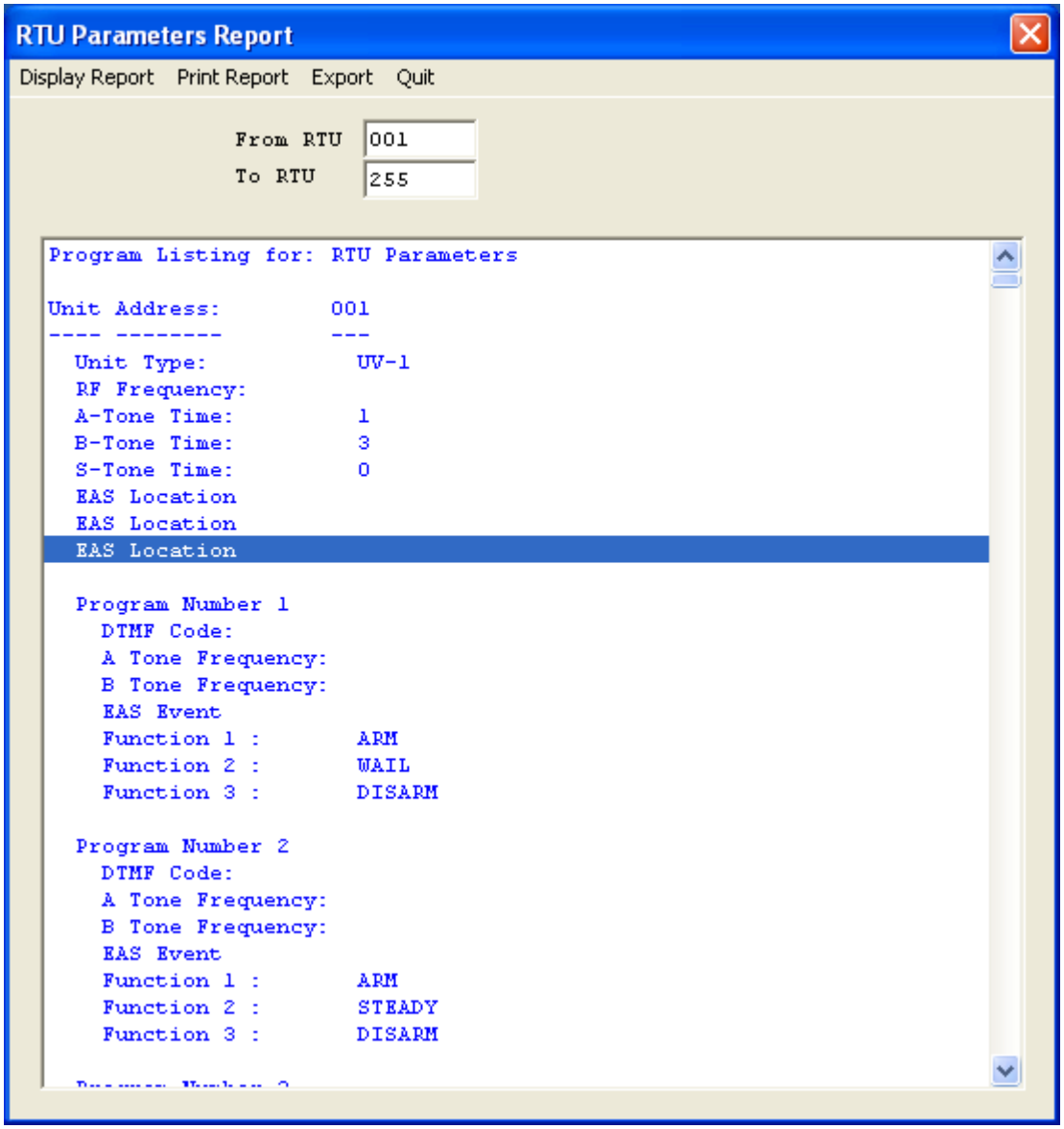
Quit

Select this radio button to quit the Current RTU Status Report selection screen.

RTU Parameters

RTU Parameters -- Prints configuration data for all RTUs in the system.

After selecting "RTU Parameters", the following screen will be displayed:



AVAILABLE RADIO BUTTON SELECTIONS

Display Report

Select this radio button to display the report on the screen.

Print Report

Select this radio button to send the report to a printer.

Export

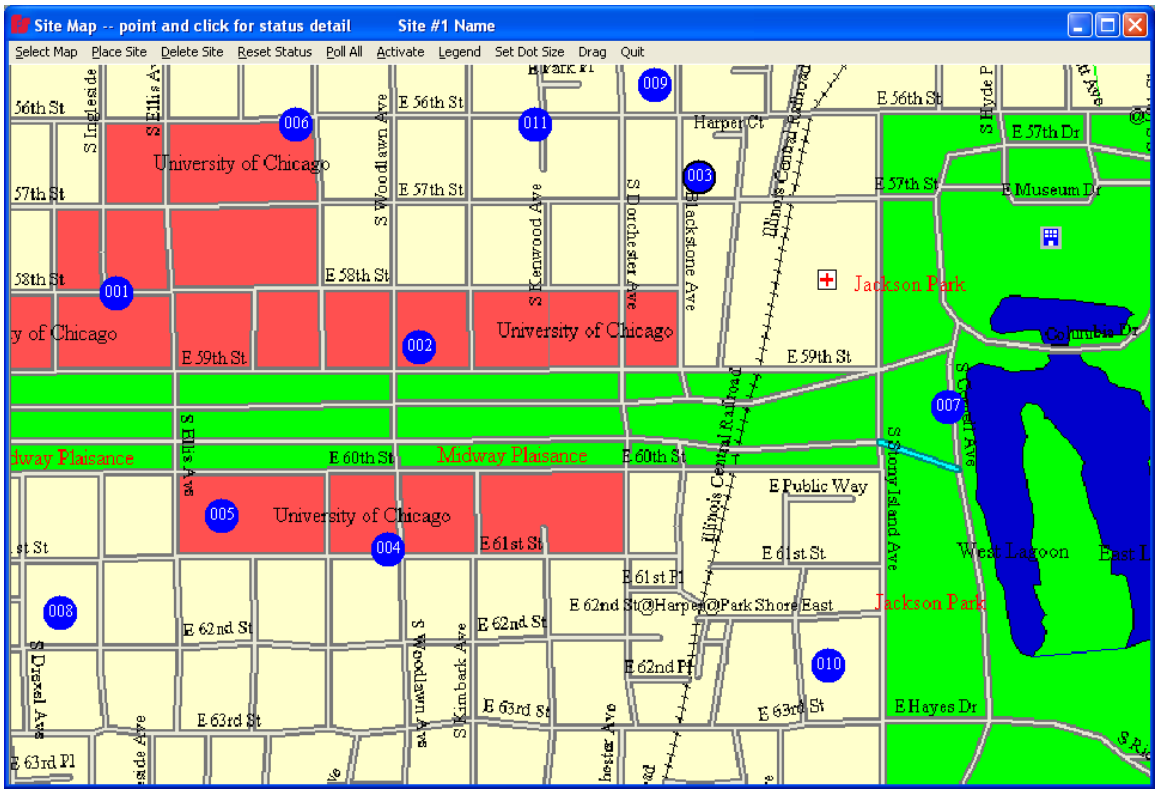
Select this radio button to create a text file of the report. A Windows Browse dialog will pop up for path and file name selection.

Quit

Select this radio button to quit the RTU Parameters selection screen.

Map

After selecting Map from the SFCDWARE System window, the map window is displayed. The Map window is displayed on top of the main SFCDWARE System window and will overlap any other SFCDWARE System window already displayed. The original SFCDWARE System window headings will not be visible when the map is maximized.



Map Description

The map screen allows the display of bitmaps that have been previously installed in the system. Any number of maps can be installed up to a maximum of twenty. Dots may be placed on each map, which represent siren sites. These dots are color coded to represent the status of the site number assigned to them:

Blue	Reset Condition – No status information received since Reset Status.
Steady Green	Siren is not sounding; No faults detected.
Steady Red	Siren is not sounding; Faults detected.
Flashing Green	Siren is currently sounding; No faults detected.
Flashing Red	Siren is currently sounding; Faults detected.
Flashing Yellow	Local Activation or False Alarm has occurred.
Violet	Communication Failure.

Note: The color status represents the site conditions at the time of the last poll response.

When the mouse pointer is moved to a siren site dot, the site is highlighted and the site name is

displayed at the top of map window. The name of this site will remain displayed until the mouse pointer is moved to another site (Note: Site names are setup on the RTU configuration screen). Clicking on a site will display the Status Detail for the respective site (See "Status Detail for RTU" information later in this section of the manual).

IMPORTANT INFORMATION ABOUT SITE STATUS

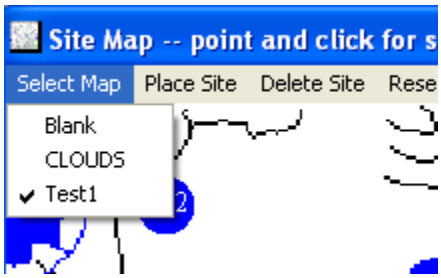
Some site status conditions are latched during activation. These are reset by sending a Master Reset command. The "Last Function" entry on the Status Detail screen displays the last function sounded since Master Reset or Standby if none occurred.

A communication failure status means the base was unable to communicate with the site during the last activation or poll attempt. This can be caused by radio channel noise or a malfunction at the site. If this condition priests, contact system manager or qualified service personal.

It is very important to remember that the status shown on any SFCDWARE screen is current as of the last poll. *You must poll to get current information.*

Select Map

Select Map displays a list of available maps. To select another map, click on the desired map from the dropdown list. The new map will automatically be loaded and displayed. The selected map setting is retained until SFCDWARE is closed. When SFCDWARE is started, the selected map will default to the first one in the list.



To add or delete available maps, refer to “Map Setup” on the System Status screen.

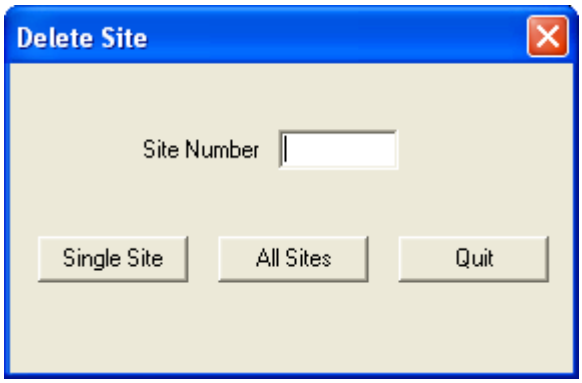
Place Site

Click this menu option to place a new siren site on the map. You will be prompted for the Level2 password to access this function (if applicable). After selection, the mouse cursor will take the form of a dot, representing a siren site. Use the mouse to drag site into position and right-click to drop at the desired location. The following dialog will appear:

Enter the desired site number and click Add to place site. To cancel without placing site click Cancel.

Delete Site

Click Delete Site to delete site(s) from the map. You will be prompted for the Level2 password (if applicable). The following dialog box will be displayed:



To delete a single site, enter the site number and click the Single Site push button. To delete all sites, click the All Sites push button (a warning message will appear). To quit without deleting any site, click the Quit button.

Reset Status

This selection will set all siren dots to blue; thereby resetting the color-coded status as a result of the last poll response. See map description below for color-coded status details. Typically the Reset Map function would be used just prior performing a Poll All command. This ensures that the color status displayed is a result of the current poll, and not a previous poll.

Poll All

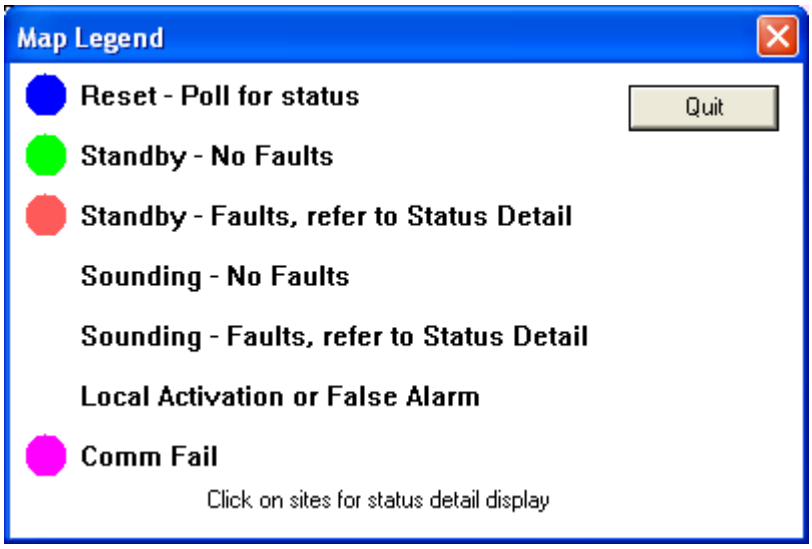
Initiates a poll sequence of all RTUs in the system. Note: The operator must always be aware that site conditions shown on any SFCDWARE System screen, including the map, are not real time, but represent conditions at the time of the last polling. Large systems may take several minutes to complete a polling sequence.

Activate

This selection will display the SFCDWARE Activation Hotkeys window. Refer to the Activate section of this manual for details regarding this screen.

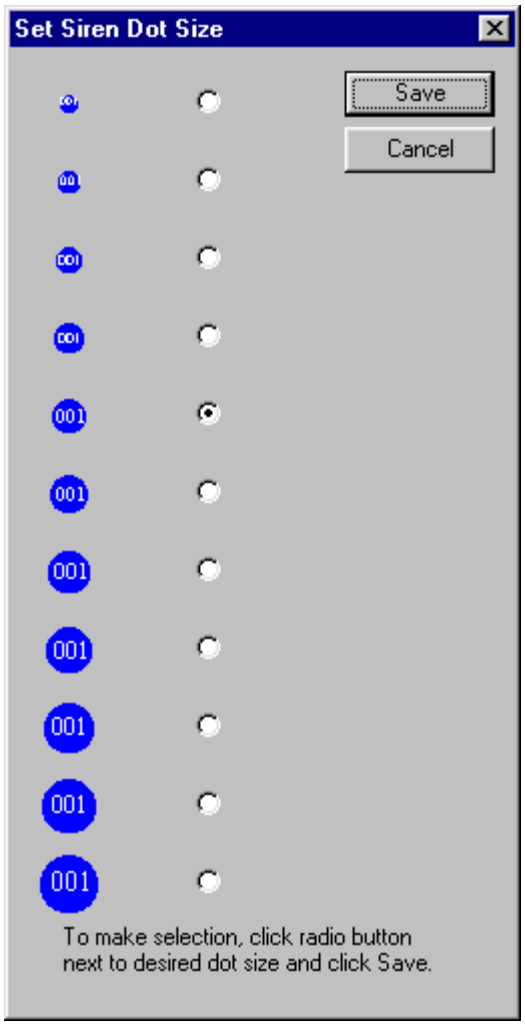
Legend

Clicking this button will display a legend of the color codes for siren site dots (Note: Sounding and Local Activation dots are flashing).


Map Legend
Reset - Poll for status
Quit
Standby - No Faults
Standby - Faults, refer to Status Detail
Sounding - No Faults
Sounding - Faults, refer to Status Detail
Local Activation or False Alarm
Comm Fail
Click on sites for status detail display

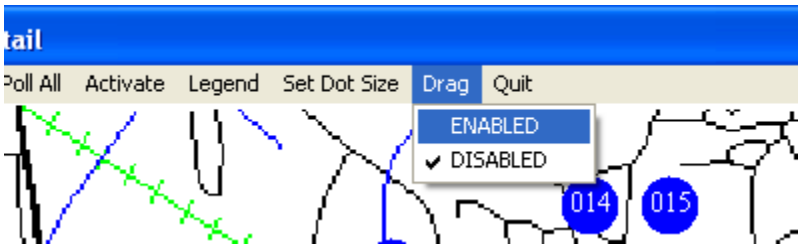
Set Dot Size

Allows the user to select the size of the siren dot icons. The following dialog will pop up:



To change selection, highlight the radio button adjacent to the desired dot size and click “Save”. All siren dot icons on the map will revert to the newly selected size.

Drag



Clicking this option allows drag mode to be enabled or disabled. When enabled, siren sites may be moved using the following steps:

1. Place cursor over site and press and release the right mouse button (right click).
2. Drag site to the desired location.
3. Right click again to drop site into position.

Enabling drag mode requires the Level2 password (if enabled).

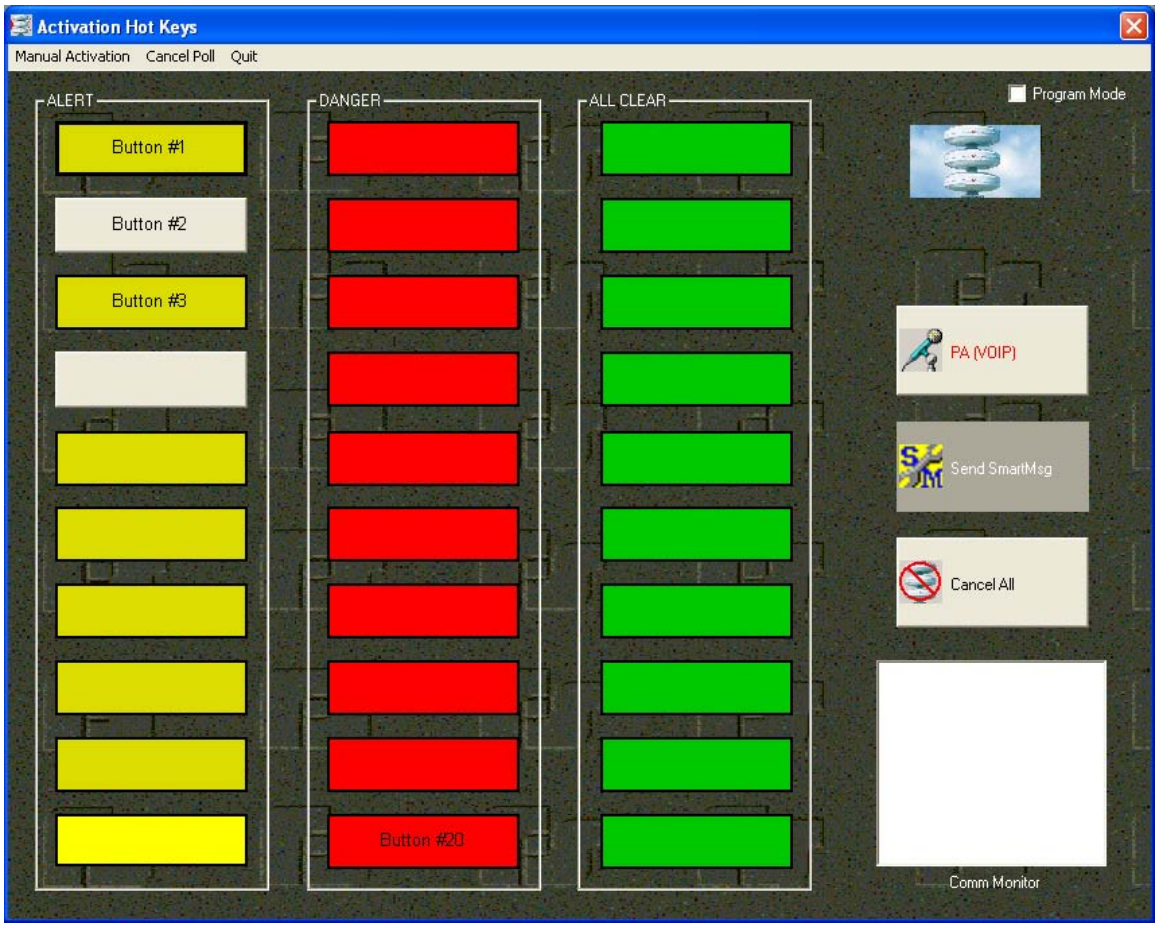
To prevent accidental or unauthorized dragging of sites, drag mode will automatically disabled after one minute.

Quit

Select this Menu option to close the map window.

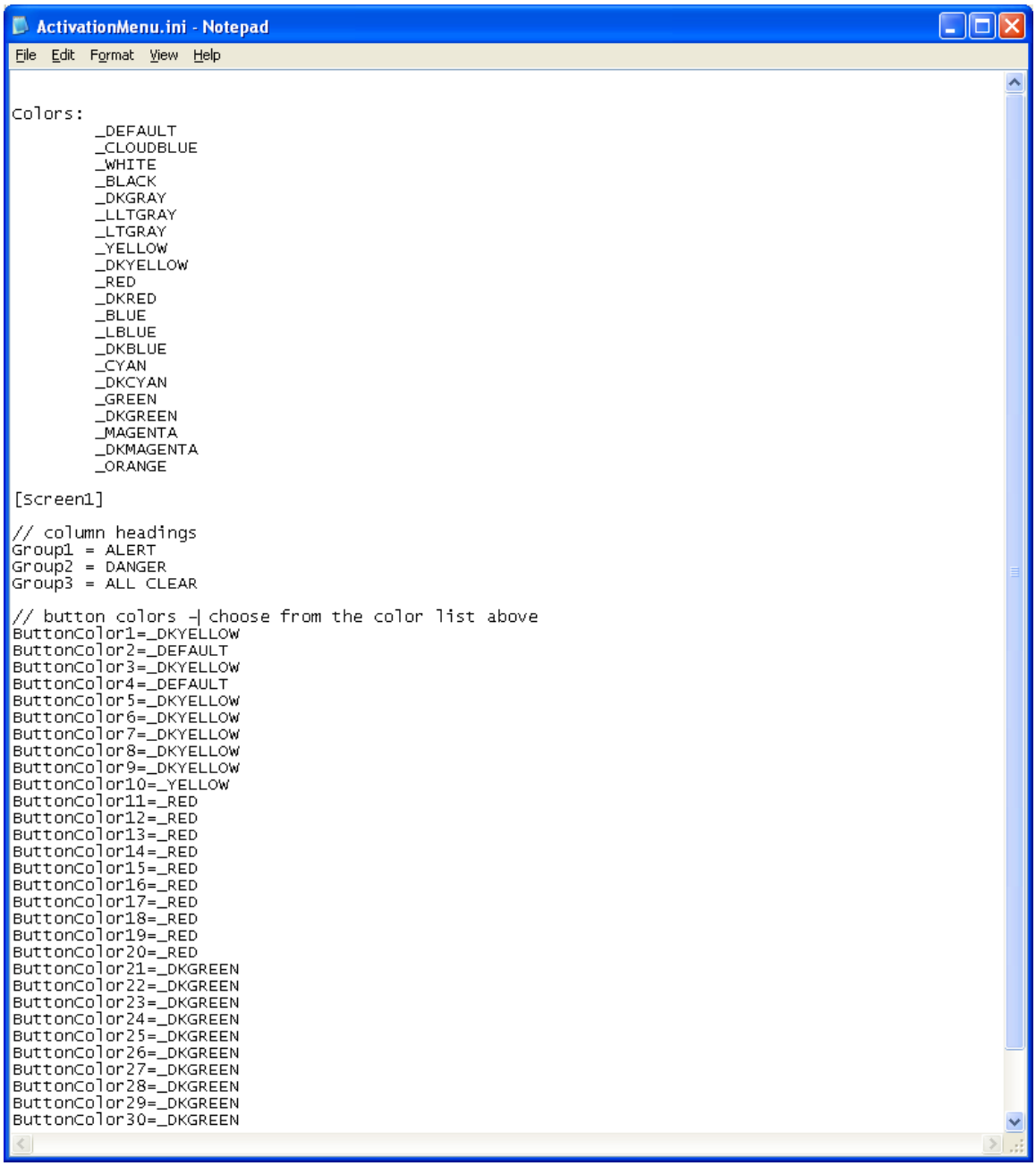
Activate

After selecting Activate from the SFCDWARE System or Map window, the following screen is displayed. This selection is used to send a preprogrammed activation sequence. The user will be prompted for the Activation password (if applicable).



Button Colors and Column Headings

Button colors and column headings are user configurable by editing the settings in the 'AlarmMeni.ini' file. This file is located in the Sfcdware working folder and may be edited with Notepad or other compatible text file editor.



ActivationMenu.ini - Notepad

File Edit Format View Help

```
Colors:
        _DEFAULT
        _CLOUDBLUE
        _WHITE
        _BLACK
        _DKGRAY
        _LLTGRAY
        _LTGRAY
        _YELLOW
        _DKYELLOW
        _RED
        _DKRED
        _BLUE
        _LBLUE
        _DKBLUE
        _CYAN
        _DKCYAN
        _GREEN
        _DKGREEN
        _MAGENTA
        _DKMAGENTA
        _ORANGE

[Screen1]

// column headings
Group1 = ALERT
Group2 = DANGER
Group3 = ALL CLEAR

// button colors -| choose from the color list above
ButtonColor1=_DKYELLOW
ButtonColor2=_DEFAULT
ButtonColor3=_DKYELLOW
ButtonColor4=_DEFAULT
ButtonColor5=_DKYELLOW
ButtonColor6=_DKYELLOW
ButtonColor7=_DKYELLOW
ButtonColor8=_DKYELLOW
ButtonColor9=_DKYELLOW
ButtonColor10=_YELLOW
ButtonColor11=_RED
ButtonColor12=_RED
ButtonColor13=_RED
ButtonColor14=_RED
ButtonColor15=_RED
ButtonColor16=_RED
ButtonColor17=_RED
ButtonColor18=_RED
ButtonColor19=_RED
ButtonColor20=_RED
ButtonColor21=_DKGREEN
ButtonColor22=_DKGREEN
ButtonColor23=_DKGREEN
ButtonColor24=_DKGREEN
ButtonColor25=_DKGREEN
ButtonColor26=_DKGREEN
ButtonColor27=_DKGREEN
ButtonColor28=_DKGREEN
ButtonColor29=_DKGREEN
ButtonColor30=_DKGREEN
```

To change the color of a button, replace the current color setting with a new setting from the Colors list at the beginning of the file. “_DEFAULT " will display the standard grey 3-d style windows button. Example: To change button #11 from Dark Yellow to Green, change “ButtonColor11=_DkYellow” to “ButtonColor11=_GREEN”.

Column headings may be changed by editing the Group1, Group2 and Group3 fields.

AVAILABLE MENU SELECTIONS:

Manual Activation:

Displays the Manual Activation window. This screen is used to send manual activation commands.

Cancel Poll

Terminates a poll all or system wide polling sequence.

Quit

Closes the Activation Hotkey window.

Activation Hotkeys:

Clicking on a hotkey will send a preprogrammed activation sequence to site(s). A message box will appear warning the operator sirens are about to sound:

Click Cancel to terminate activation or OK to continue. Note: Clicking OK will sound sirens! There will be no other opportunity to terminate activation.

Note: Some activation hotkeys may be grayed out. This means the activation password entered does not have access rights to these hotkeys and they are disabled. See your system administrator if you have a concern about your access rights.

Send Status

This list box displays the actual commands as they are sent out to the siren sites. It will also show if the command was acknowledged by the RTU (individual sites only). Note: Acknowledgment is proof that a remote RTU received the activation command, but not that the siren is actually running and working correctly. The site must be polled to obtain a report of actual status conditions.

Siren Graphic

Sound waves will emit from the siren graphic to inform the user that an activation command has been sent. This will occur for the duration programmed in the Functions list box of the base status screen. This may not necessarily be the actual duration of siren sounding, which is programmed for each individual siren.

Cancel All

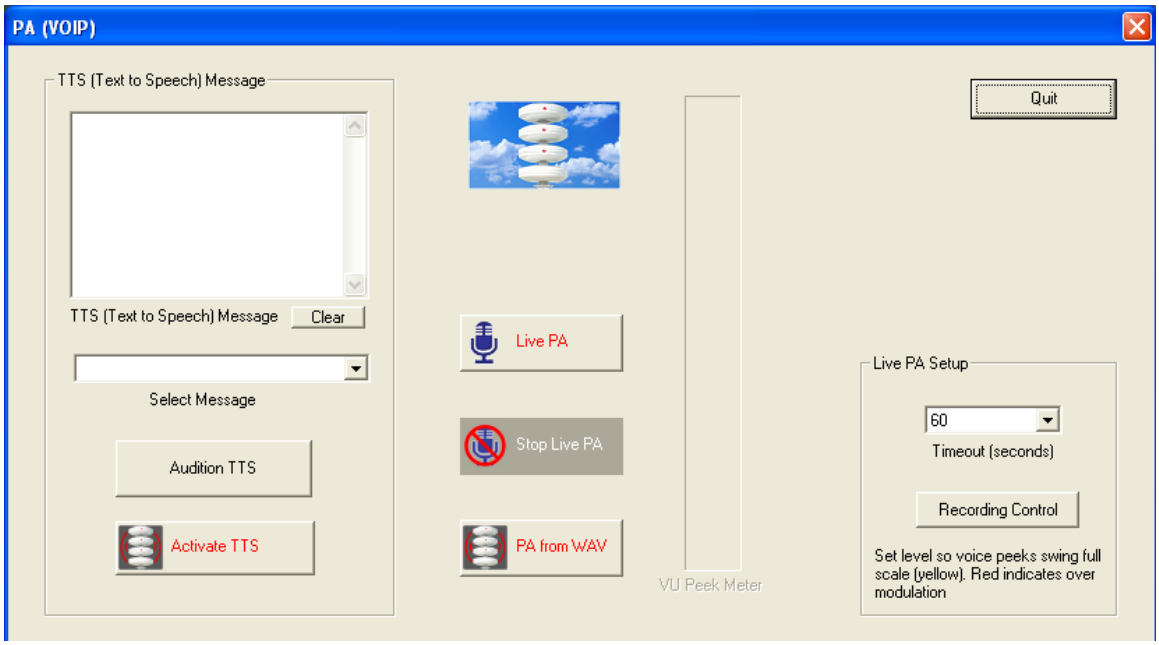
Pressing this key will cancel the sounding of all sites that are currently running a function.

PA (VOIP)

The Public Address feature is only available when the Communication Mode is configured for Codespear or Modem and there are one or more electronic type sirens in the system.

PA (VOIP) allows Live PA, Text To Speech and PA from Wav on Codespear enabled systems or systems utilizing the MSK Modem. When using the MSK Modem for Public Address SFCDWARE will automatically send activation code #1 to put the siren in PA Mode. *Code #1 must be programmed for RADIO PA*.

Clicking on the PA (VOIP) button will display the Public Address dialog:



Text To Speech

Two methods are available for creating a Text To Speech (TTS) public address announcement.

1. Clicking on the down arrow of the Select Message dropdown selects a preconfigured TTS message. When selected the message will appear in the TTS (Text to Speech) Message text box above.
2. Message may be manually typed into the TTS (Text to Speech) Message text box.

Press the Clear button to delete the current message.

Preconfigured TTS messages are contained in the “PAMessage.txt” file located in the SFCDWARE folder. This may be edited or updated with Microsoft Notepad or other compatible text editor.

Audition TTS

Audition selected TTS announcement on the computers speaker.

Activate TTS

Send selected TTS announcement to siren for playback.

Live PA

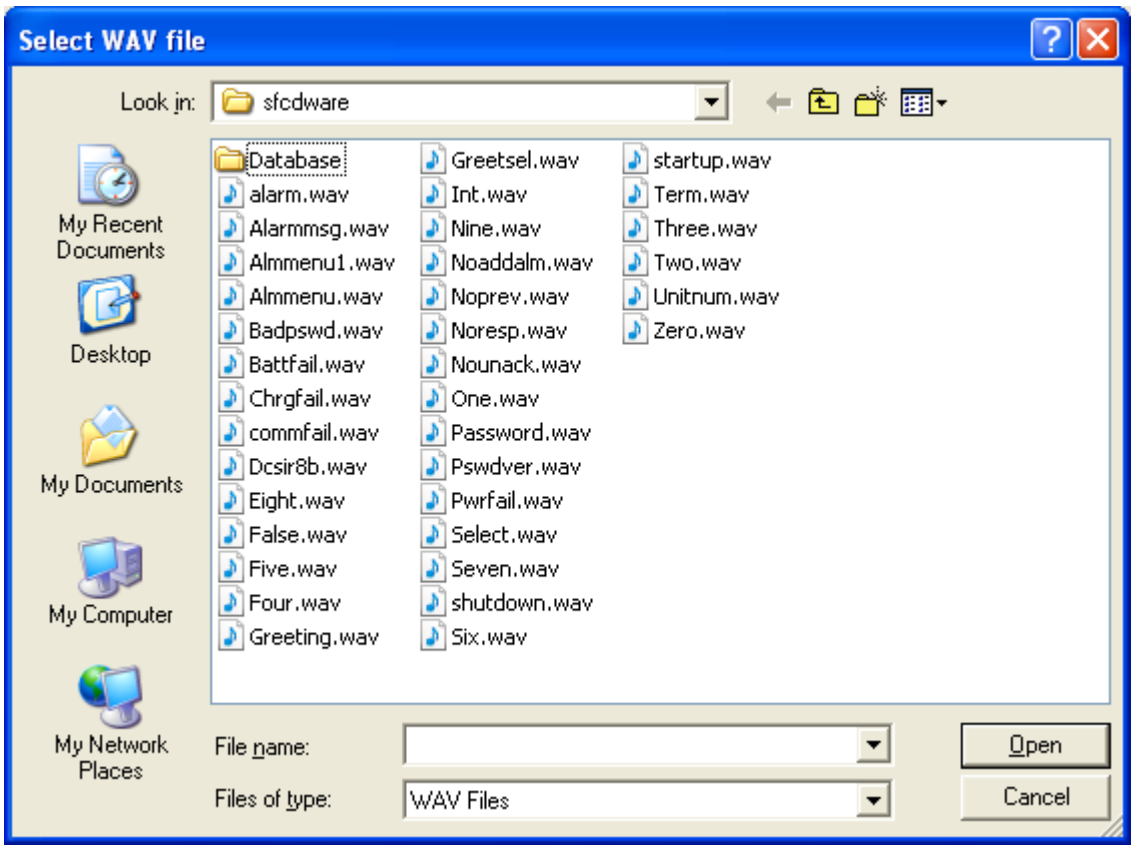
Press “Live PA” to start live public address annunciation using the computer microphone. Once initiated Live PA will remain active until the “Cancel Live PA” button is pressed or one minute, whichever occurs first.

Cancel Live PA

Pressing “Cancel Live PA” terminates transmission of Live PA.

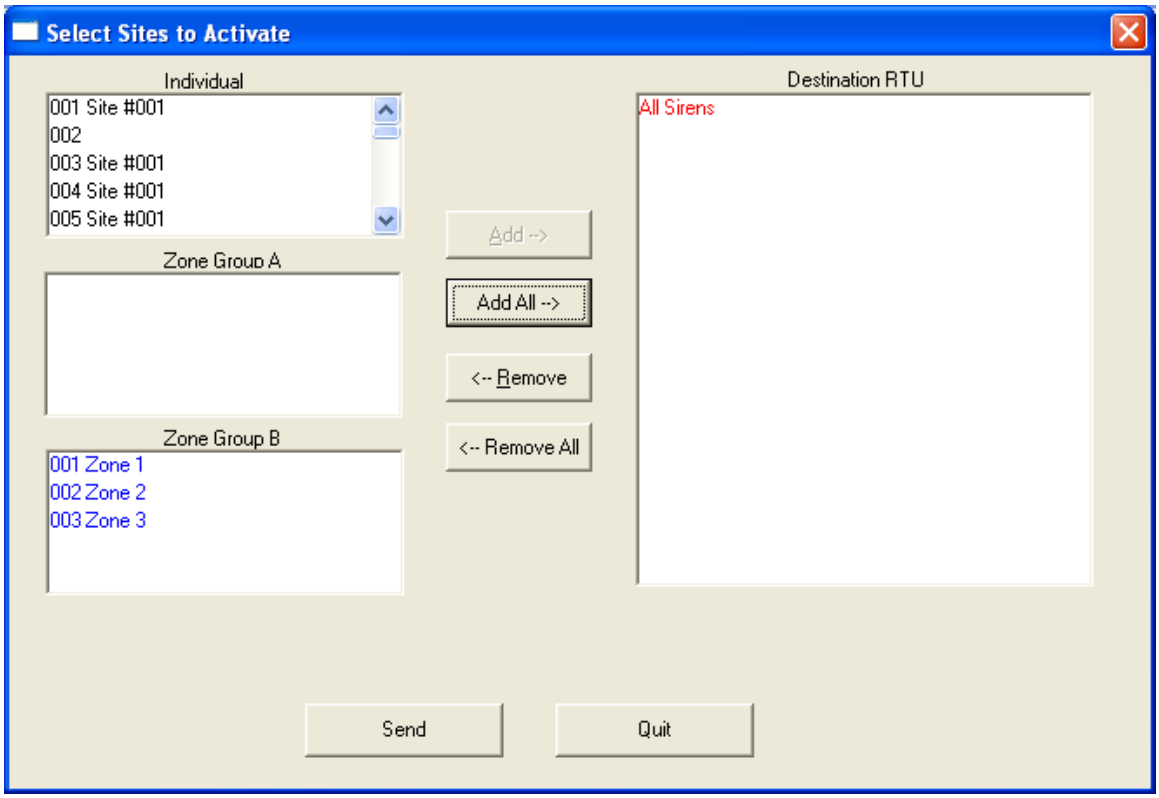
PA from Wave

This function will popup the Windows browse window, allowing selection of a WAV file for public address transmission. Most SPSF WAV file formats are supported.



Select Sites to Activate

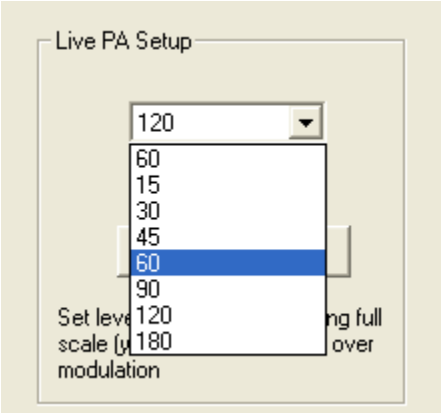
After the selection of a Public Address activation function, the “Select Sites” dialog will popup, allowing the operator so specify which sites to include in the activation.



Highlight the desired sites and zones to sound and click the **Add-→** button. Any number and combination of individual sites and zones may be selected. To sound all sites in your system click the **Add All** button. Use the **←Remove** and **←Remove All** buttons to remove selected sites.

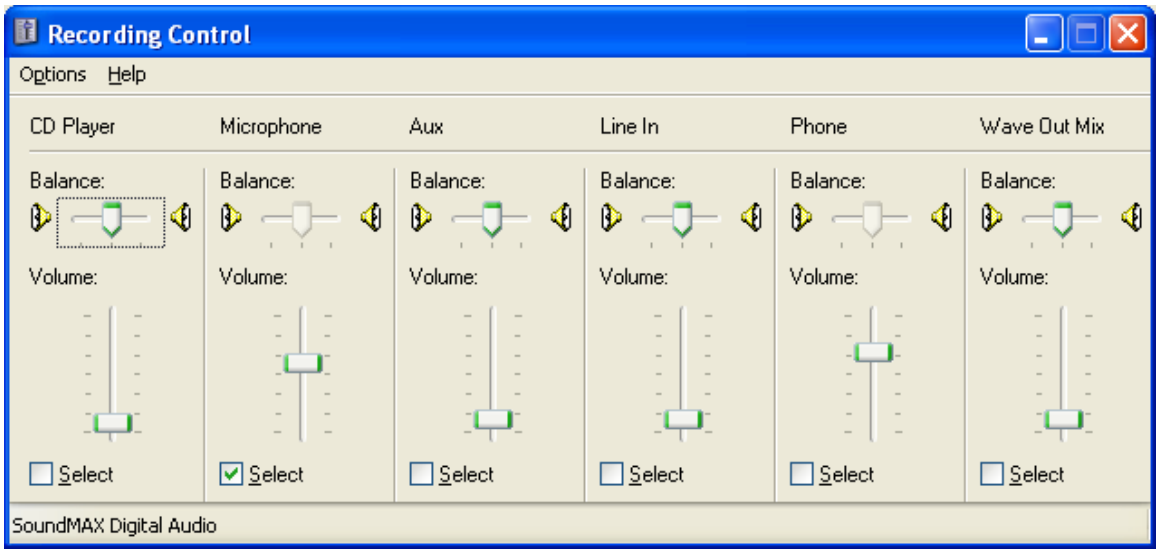
Timeout (seconds)

The Timeout dropdown sets the Live PA automatic timeout duration. You must have Configuration or Global Administrator rights to change this setting. Note: *Many radios have built in timers that limit transmission time. It is good practice to set the Timeout time equal or less than the radios built in timer (if applicable).*



Recording Control

The Record Control button displays the Windows® Record Control panel. Use this panel to adjust the Live PA input level.



VU Peek Meter

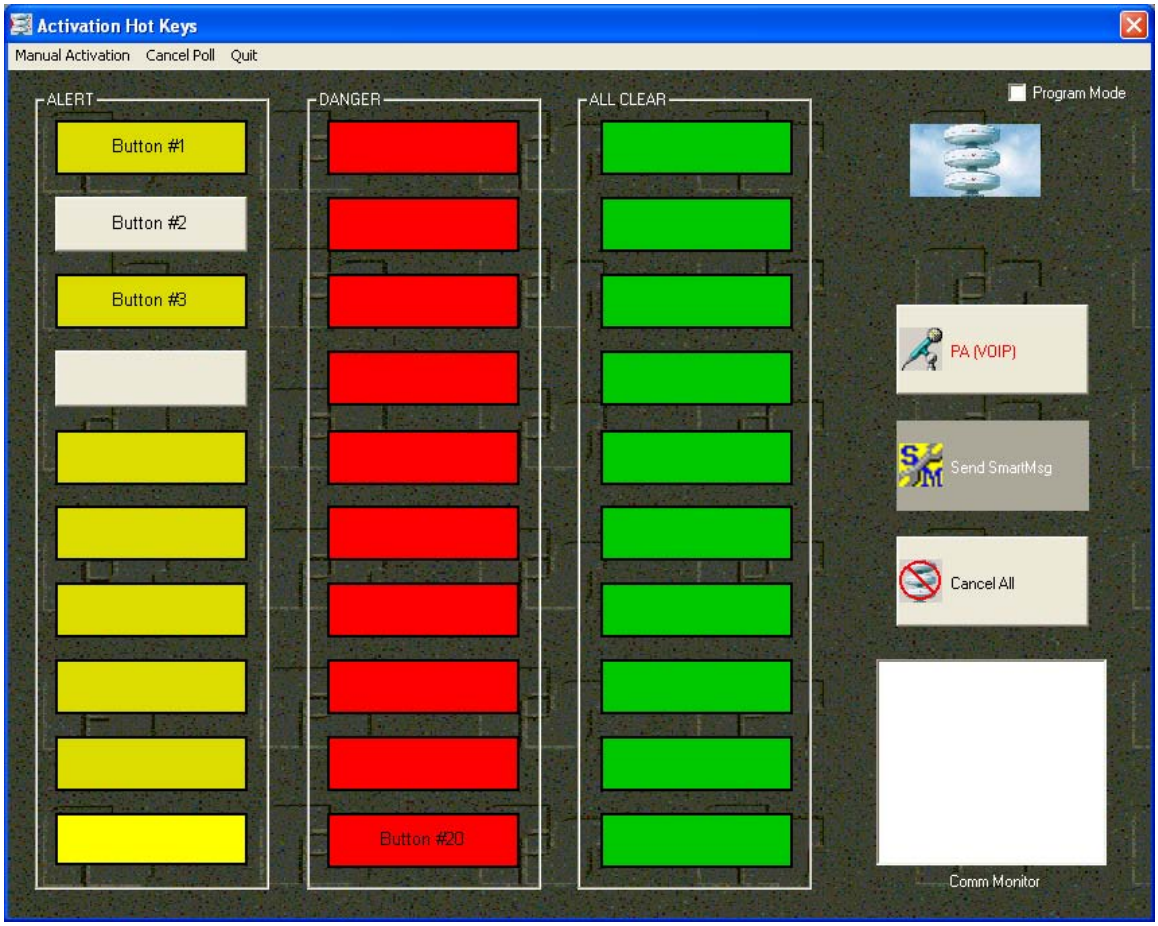
Adjust the Microphone level so the VU Peek Meter sweeps full scale on voice peeks. The VU Peek meter is color coded as follows:

Green:	Level below peek
Yellow:	One or more samples at or above peek.
Red:	More than 5% of samples at or above peek.

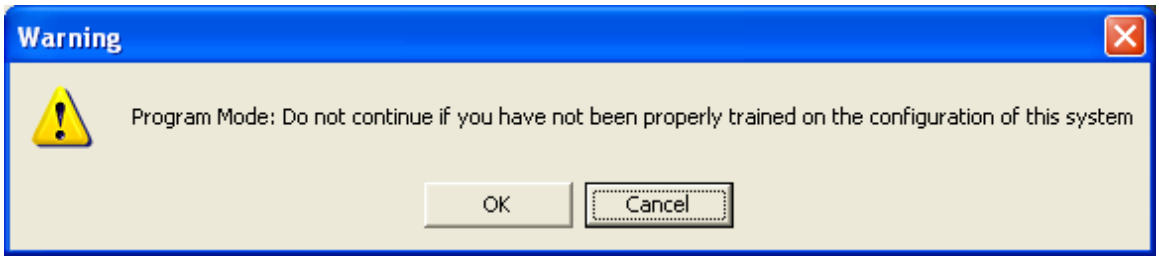
The optimum level is obtained when the color is alternating between green and yellow with normal voice. Reduce the level if red is easily achieved, however occasionally hitting red is satisfactory.

Program Mode

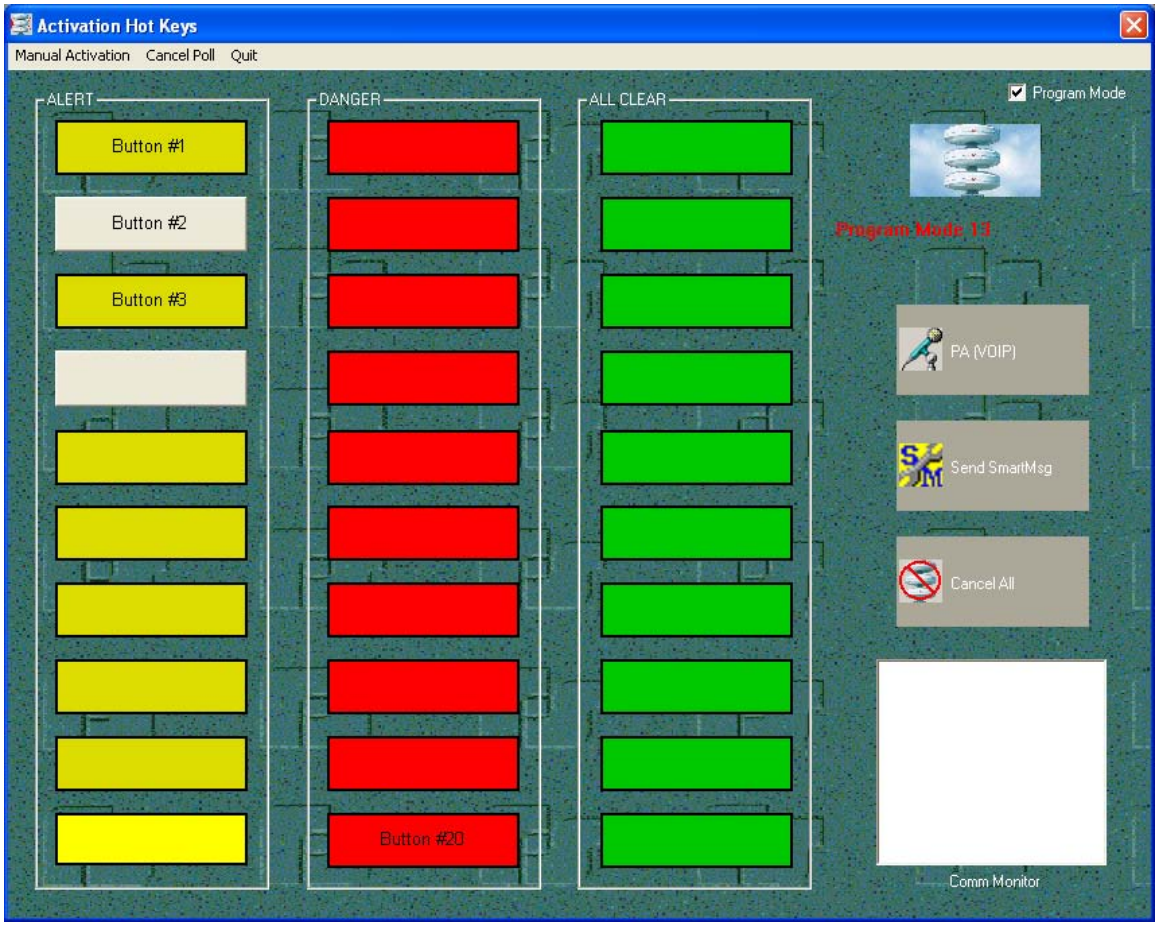
Program Mode allows the configuration of hotkeys. When program mode is enabled, clicking on a hotkey will bring up the Program Hotkey screen for the respective key. To enable program mode, check the Program Mode check box located on the Activation Hotkey screen.



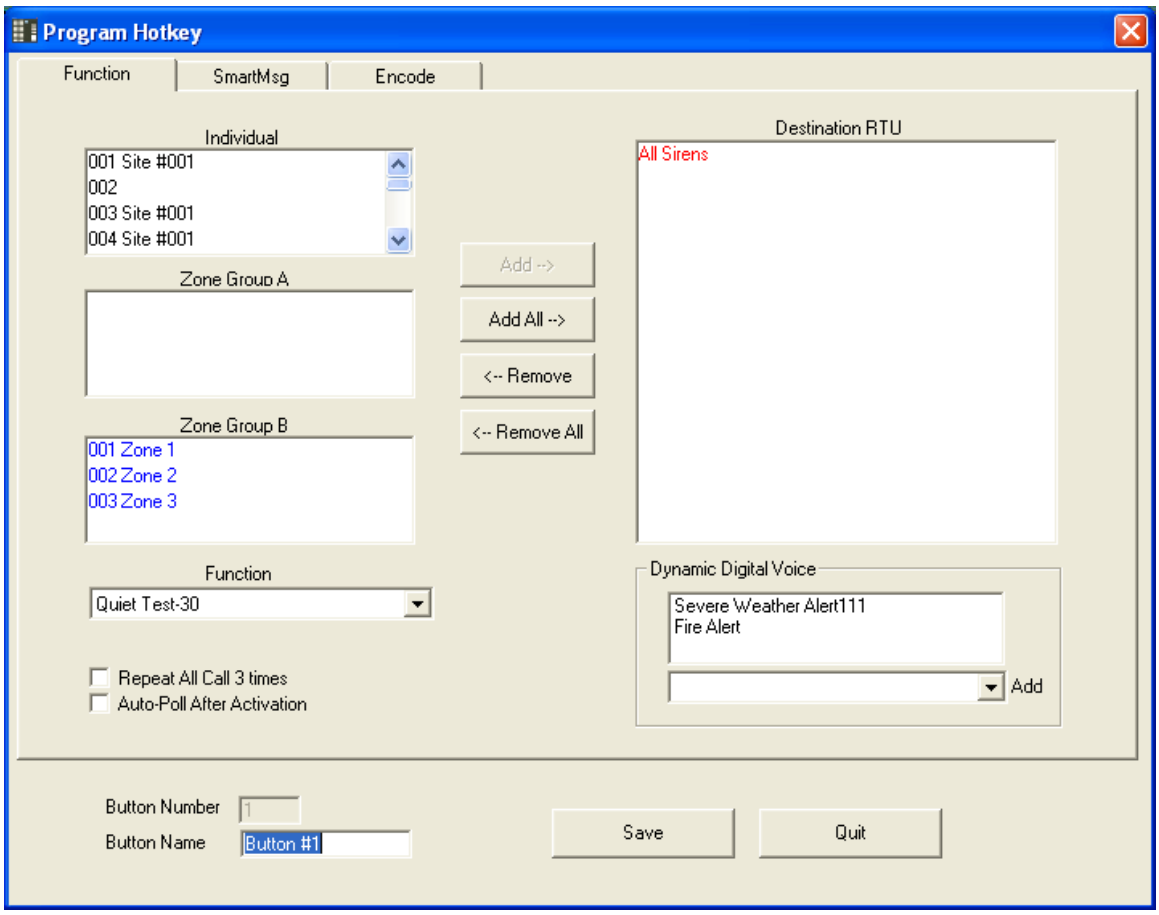
The following warning will be displayed:


Warning
Program Mode: Do not continue if you have not been properly trained on the configuration of this system
OK
Cancel

Click OK to continue or Cancel to abort. The Level2 Password prompt will appear if enabled. To exit program mode, uncheck the program mode check box. If no activity is detected for 15 seconds, program mode will automatically terminate. While in program mode, the background will change from black to green and “Program Mode” will appear under the siren graphic.



Click on the desired hotkey to program. The Program Hotkey dialog will appear with the current programming for the selected hotkey:



Button Number

This non-editable field displays the button number of the button being programmed.

Button Name

Enter the name of the button that will appear on the activation hotkey screen. Names must be 19 characters or less.

Save

Click this button to update the hotkey configuration. A confirmation message will appear.

Quit

Click this button to close the Program Hotkey dialog without updating the hotkey configuration. A warning message will appear.

Function Tab

The function tab allows the configuration of a digital activation function.

Individual

The individual list box contains a list of all sites in your system. Selected individual sites will be sounded sequentially (one at a time). There is a time delay involved as SFCDWARE sends an activation signal to each site (RTU) individually. If it is desired to activate a large number of sirens without a time delay, it is recommended to use Zone or All Call.

Zone Group A
Zone Group B

Zone Group A and Zone Group B contain preconfigured zones. Zones are a grouping of sites defined using the Zone Setup dialog. Zone activations are sent as a single transmission to all sites within the zone.

All Call

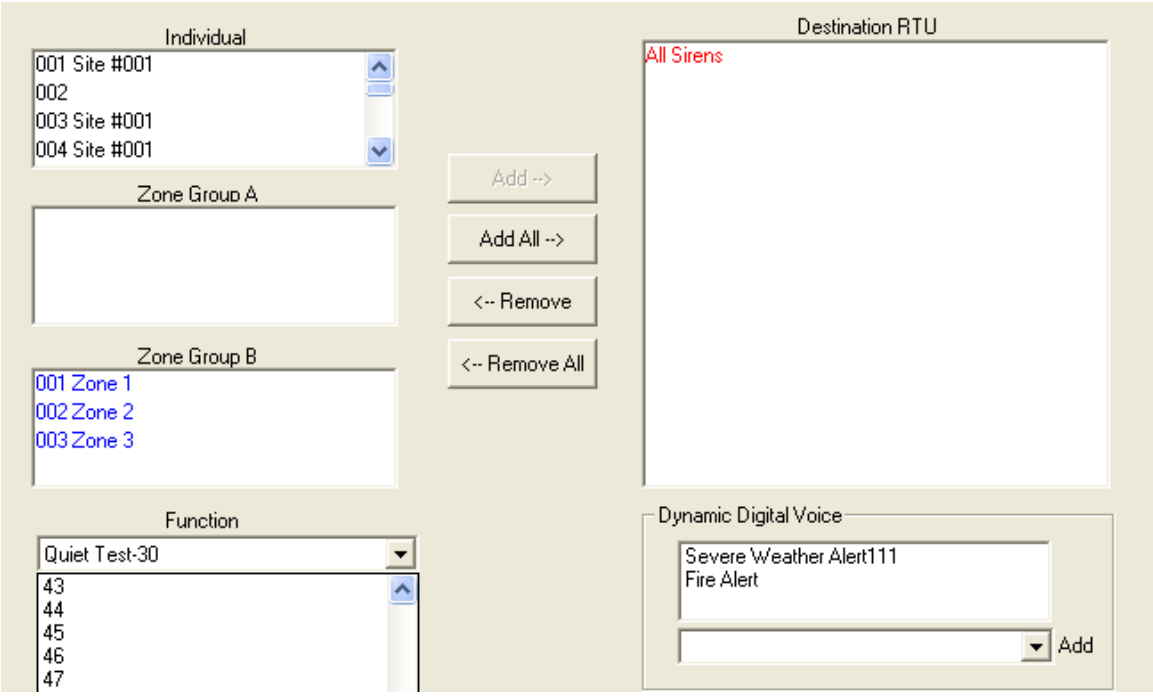
To select all sites in your system click the **Add All→** button. "All Sirens" will be displayed in the destination list. All Call is sent as a single transmission to all sites in your system.

Destination

The destination list contains the currently selected sites and zones. To add sites highlight the desired sites and zones to sound and click the **Add→** button. Any number and combination of individual sites and zones may be added. To select all sites in your system click the **Add All→** button. "All Sirens" will be added to the destination list and all other selections will be removed. "All Sirens" must be removed before Individual Sites or Zones may be added. To remove sites click the **← remove** or **←Remove All** button.

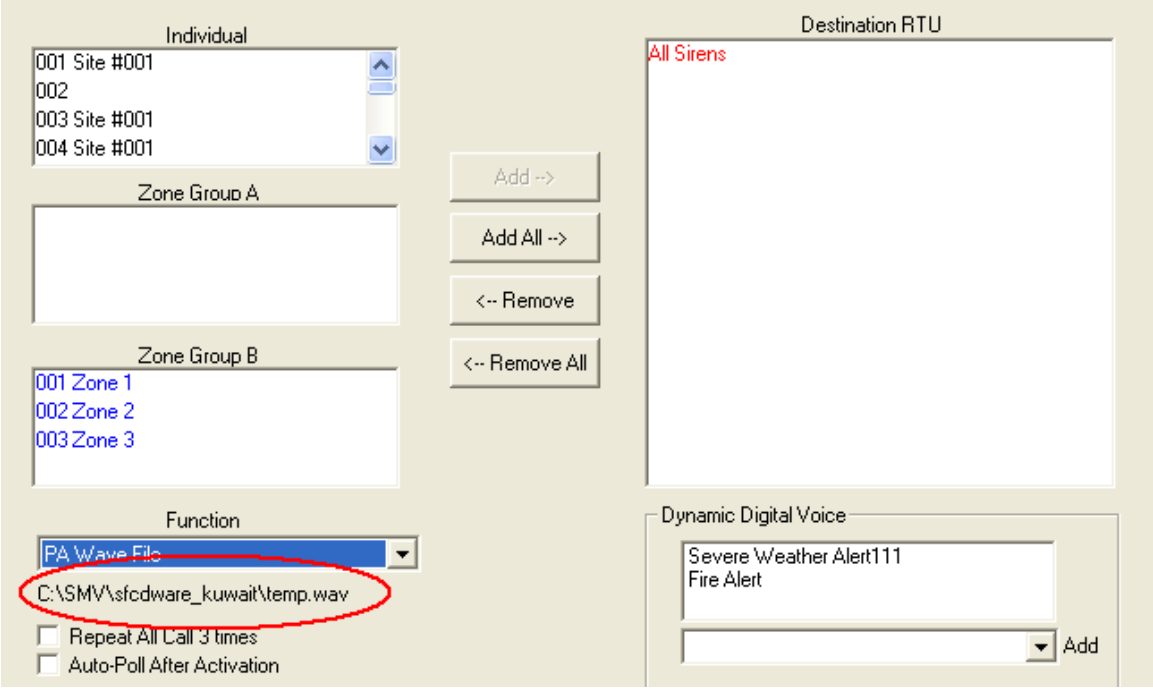
Function

The Function list box displays the function to be sounded. To change this selection, click on the control and select the desired function from the dropdown list.



PA Wave File
PA SmartMsg

'PA SmartMsg' and 'PA Wave File' are special functions for streaming audio to the RTU as public address. 'PA SmartMsg' converts the SmartMsg text to audio using text to speech (TTS). 'PA Wave File' plays a previously recorded wav file. When 'PA Wave File' is selected the Windows® browse dialog will appear. The selected filename will appear below the Function setting:



'PA Wave File' and 'PA Smartmsg' only function on channels programmed for Codespear mode or Modem mode using the Federal Signal MSK Modem (2005249). Do not use these functions on channels programmed for SS2000. When using Modem mode with the MSK Modem, program #1 of the UltraVoice must be programmed as:

ARM
PA OUTPUT
DISARM

Auto-Poll after Activation

If this check box is checked, SFCDWARE will poll each site after sending the activation command.

Repeat All Call 3 times

Check this option to enable all call repeats. The delay between repeats is configured using the "Retry Delay" parameter on the System setup screen. Note: This setting overrides the "Repeat All Call 3 times" setting on the System setup screen.

Dynamic Digital Voice

The Dynamic Digital Voice list displays a list of digital voice messages to be played back during the DYNAMIC VOICE function. Messages are annunciated in sequence, starting with the first message in the list and ending with the last. Up to a maximum of 20 messages may be programmed. If dynamic voice is not used, this list may be left blank.

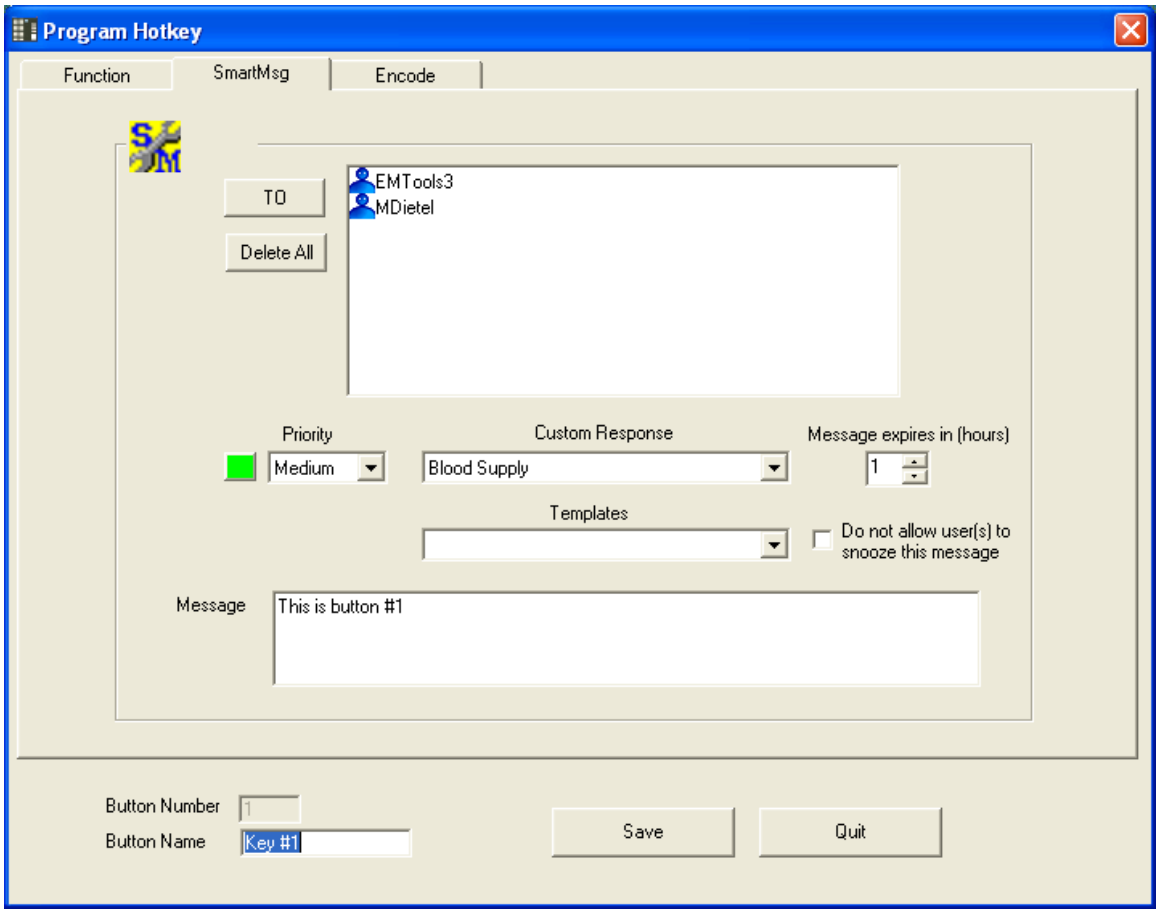
To add a message click the add button and select the desired message from the dropdown list. The message will be placed just under the currently selected message. To delete a message, double click on the message.

Note: Dynamic Digital Voice messages are contained in the “voice.txt” file located in the SFCDWARE folder. These messages must correspond to the vocabulary chip installed in the sirens.

SmartMsg Tab

The SmartMsg feature is only available if a SmartMsg server has been configured (System Setup).

Smart Messages may be configured to be automatically sent during hotkey activation. Select the SmartMsg tab to program this option:



Templates

Templates selects a preconfigured SmartMsg on the Codespear server. To select a template, highlight the desired template in the drop down list. When a template is selected, all other fields are not applicable and disabled.

Custom Response

Custom response allows the recipient to respond to a survey upon receipt of the SmartMsg. The survey results may be analyzed using Codespear software. To select a Custom Response, highlight the desired Custom Response in the dropdown list.

TO

Message recipients are selected by clicking the Select Users button and selecting users/groups from the object selection form that appears.

Delete All

Removes all users and groups from the list.

Priority

The three message priority levels are High, Medium and Low. Each message is assigned one of these priorities. Smart Messages will not be sent if the priority setting is set to Disabled.

Message Expiration

Each message is assigned a time to expire.

- It is no longer delivered to any recipients.
- It is moved to the expired area of the database.
- It can be archived from the system by a Global Administrator.

Snooze Option

A snooze option is available which allows recipients to delay acknowledging the message. This feature is available by default. The user can click the "Snooze" button on the pop-up alert that appears on computer desktops to minimize the message for a short period of time. This allows a user to delay reading the SmartMsg message while finishing current tasks at hand. The message will then reappear on top of all other applications again after the user's set snooze interval. (The user's Message Snooze interval can be set between 30 seconds and 128 minutes. It is set via Settings—Profile in the SmartMsg Client). For messages that are immediately critical, a sender can choose to disable the snooze option.

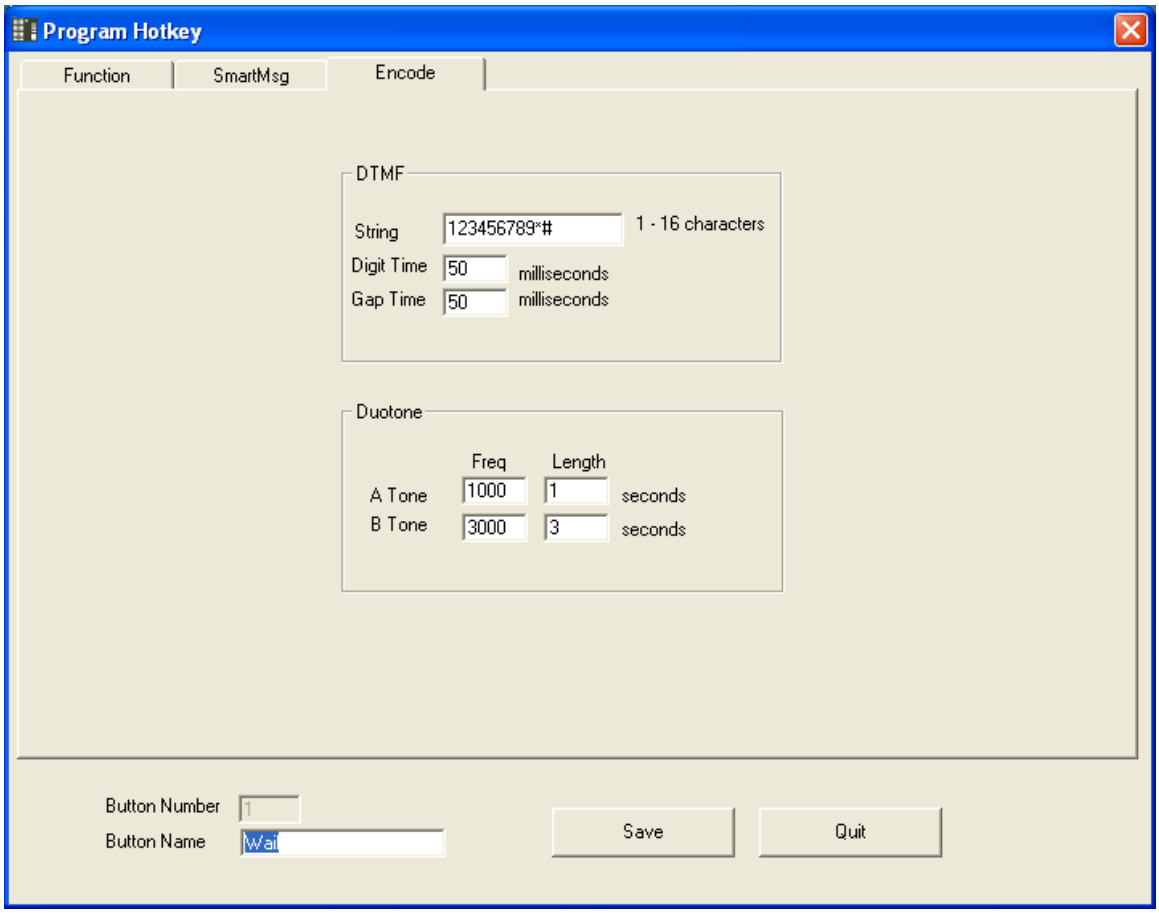
Message

Type the body of the message in the textbox provided.

Encode Tab

The Encode feature requires the MSK Modem and is not available when the Communication Mode is set to SS2000.

The Encode option allows DTMF and Duotone transmissions to be sent when an activation hotkey is pressed. To program this option select the Encode tab:



DTMF

String:

The string may be from 1 – 16 characters and must be valid DTMF characters (0-9, A-D, *, #).

Time:

The valid range for Digit Time and Gap Time is 1 - 999 ms. The Federal Signal standard is 100ms for Digit Time and 100ms for Gap Time.

Duotone

ATone and BTone:

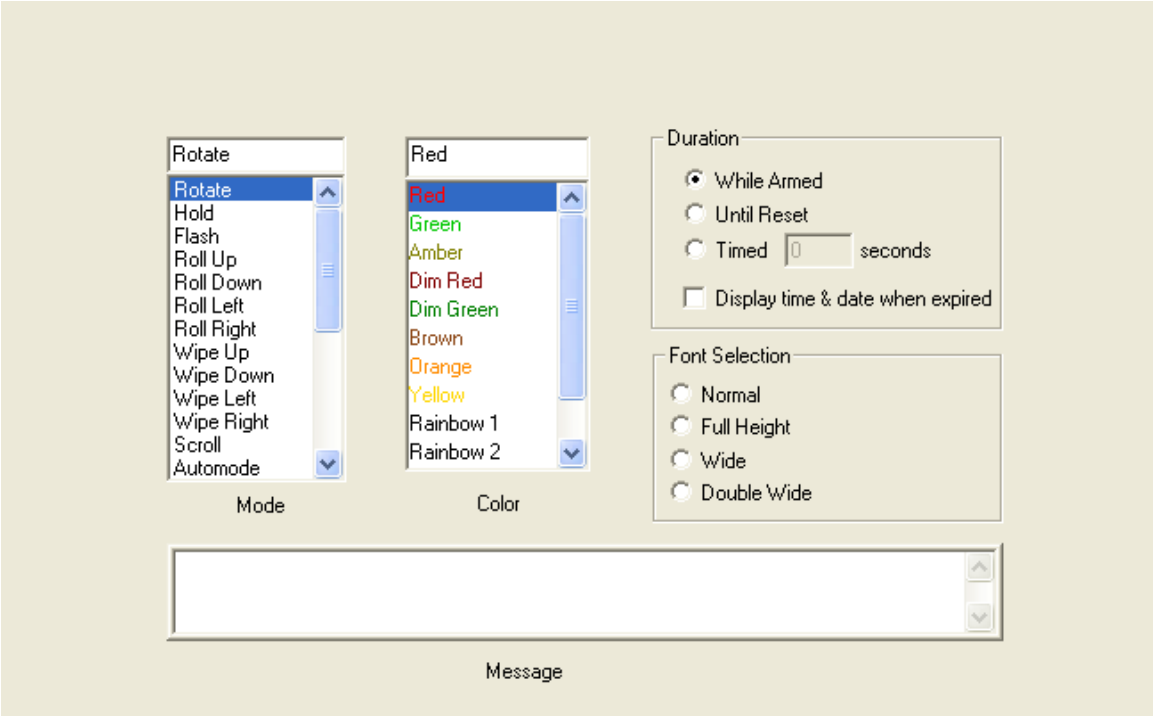
The valid range for ATone and BTone is 300 – 3000 Hz.

Length:

The valid range for Length is 0.1 – 9.9 seconds.

Display Tab

Informer-IP type units contain a Display tab to configure the operation of a scrolling message display. The scrolling message display is an optional accessory that may be attached to the Informer-IP for the display of text messages on a large overhead LED display.



Mode

The mode selection configures how the message will be displayed.

Color

Sets the color of the displayed text

Duration

Sets how long the message will be displayed:

- While Armed: Message will be displayed while the unit is armed. Choose this option if it is desired to display the message for the duration of function activation

- Until Reset: This option will display the message until a Master Reset command is sent or the Reset button is pressed
- Timed: Display message for a fixed time duration

Display time & date when expired

Check this option if it is desired to display the time & date during standby. If this option is not selected the display will be blank during standby.

Font Selection

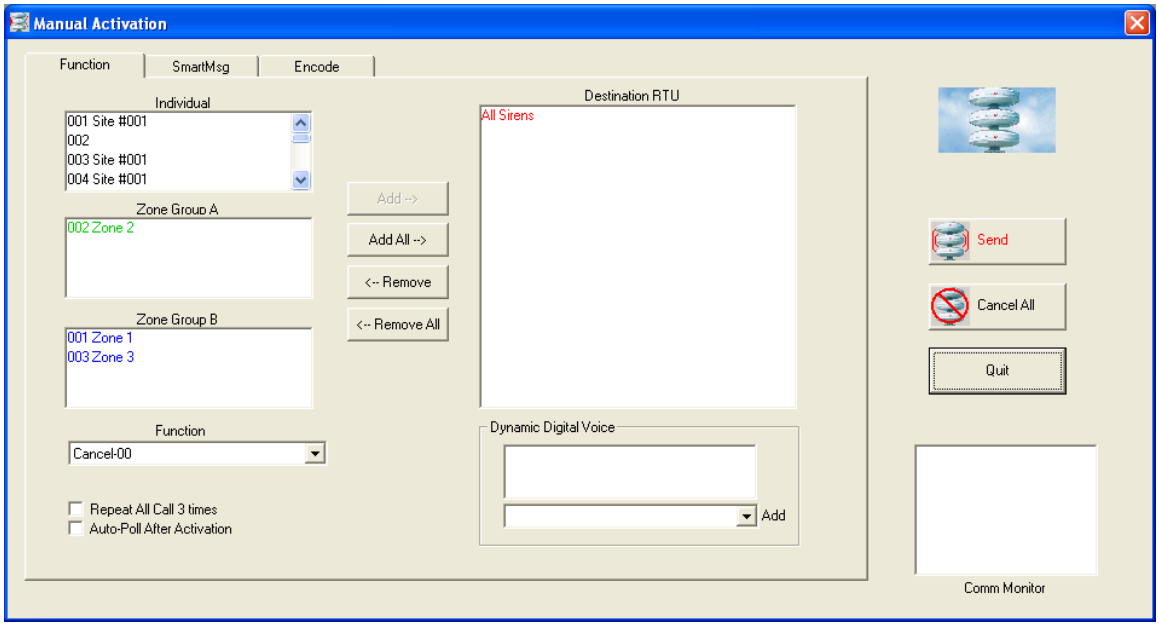
- Normal: Standard height and width
- Full Height: For multiple line displays the height is adjusted to the full height of the display
- Wide: Characters displayed slightly wider than the standard font
- Double Wide: Characters displayed double the standard width

Message

Type the message to display in the Message box .*For maximum attention getting keep messages short and to the point.*

Manual Activation

After selecting Manual Activate from the Activation Hotkeys window, the following screen is displayed. This selection is used to manually activate, send a SmartMsg, or send a DTMF or Duotone encode.

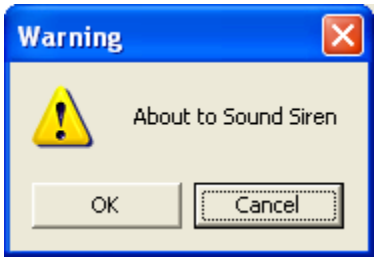


Send Status

This list box displays the actual commands as they are sent out to the siren sites. It will also show if the command was acknowledged by the RTU (individual sites only). Note: Acknowledgment is proof that a remote RTU received the activation command, but not that the siren is actually running and working correctly. The site must be polled to obtain a report of actual site conditions.

Send

Transmits the information as configured on the Function, SmartMsg and Encode tab. Encodes will be sent first, followed by the digital Function command. A confirmation message will be displayed after making this selection:



Cancel All

Clicking this button will cancel the sounding of all sirens.

Quit

Clicking on this button closes the manual activation screen.

Siren Graphic

Sound waves will emit from the siren graphic to inform the user that an activation command has been sent. This will occur for the duration programmed in the Functions list box of the System Setup screen. This may not necessarily be the actual duration of siren sounding, which is programmed for each individual siren.

Function Tab

The function tab allows the configuration of a digital activation function.

Individual

The individual list box contains a list of all sites in your system. Selected individual sites will be sounded sequentially (one at a time). There is a time delay involved as SFCDWARE sends an activation signal to each site (RTU) individually. If it is desired to activate a large number of sirens without a time delay, it is recommended to use Zone or All Call.

Zone Group A
Zone Group B

Zone Group A and Zone Group B contain preconfigured zones. Zones are a grouping of sites defined using the Zone Setup dialog. Zone activations are sent as a single transmission to all sites within the zone.

All Call

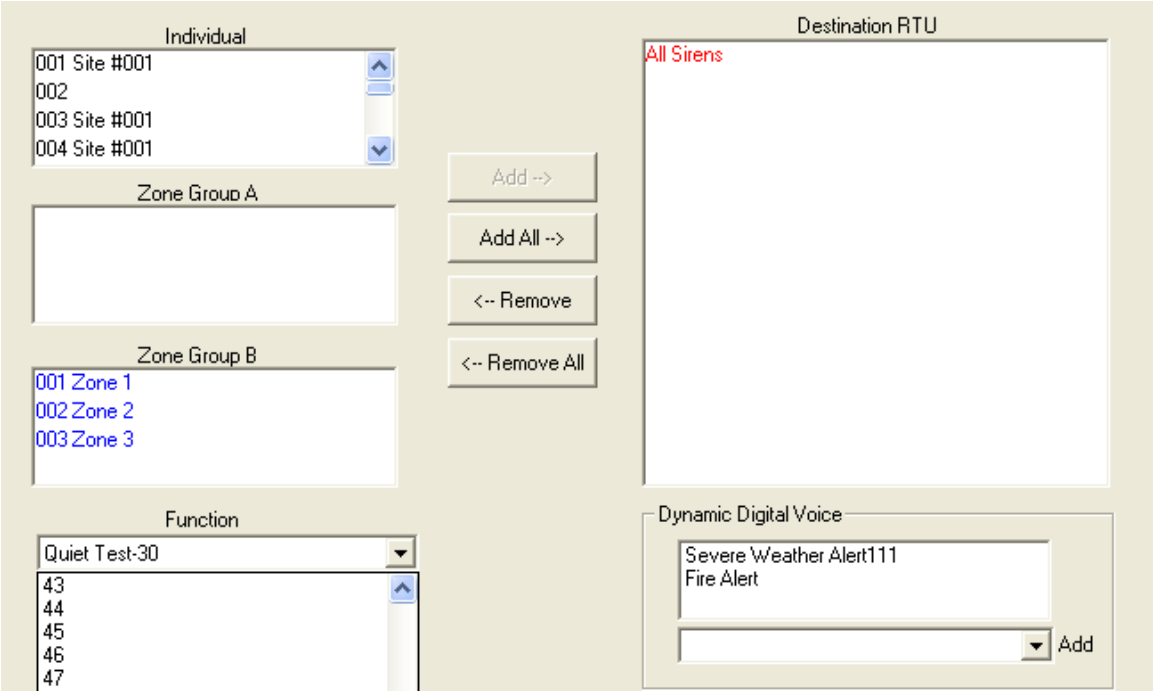
To select all sites in your system click the **Add All→** button. “All Sirens” will be displayed in the destination list. All Call is sent as a single transmission to all sites in your system.

Destination

The destination list contains the currently selected sites and zones. To add sites highlight the desired sites and zones to sound and click the **Add→** button. Any number and combination of individual sites and zones may be added. To select all sites in your system click the **Add All→** button. "All Sirens" will be added to the destination list and all other selections will be removed. "All Sirens" must be removed before Individual Sites or Zones may be added. To remove sites click the **← remove** or **←Remove All** button.

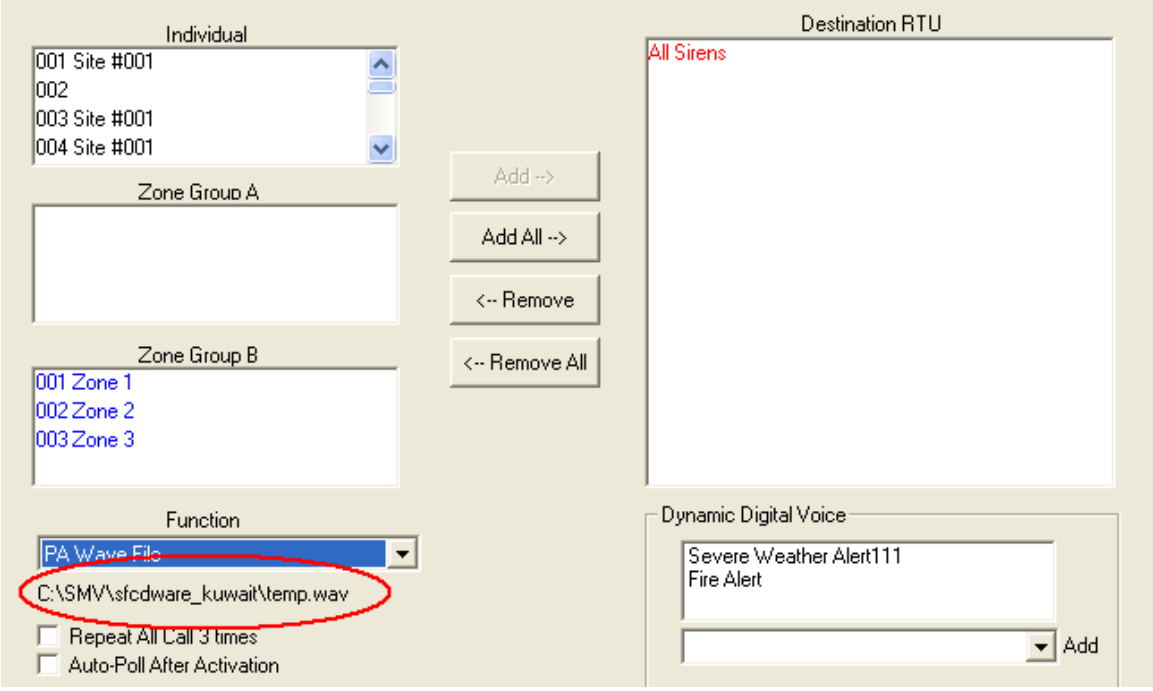
Function

The Function list box displays the function to be sounded. To change this selection, click on the control and select the desired function from the dropdown list.



PA Wave File
PA SmartMsg

'PA SmartMsg' and 'PA Wave File' are special functions for streaming audio to the RTU as public address. 'PA SmartMsg' converts the SmartMsg text to audio using text to speech (TTS). 'PA Wave File' plays a previously recorded wav file. When 'PA Wave File' is selected the Windows® browse dialog will appear. The selected filename will appear below the Function setting:



'PA Wave File' and 'PA Smartmsg' only function on channels programmed for Codespear mode or Modem mode using the Federal Signal MSK Modem (2005249). Do not use these functions on channels programmed for SS2000. When using Modem mode with the MSK Modem, program #1 of the UltraVoice must be programmed as:

ARM
PA OUTPUT
DISARM

Auto-Poll after Activation

If this box is checked SFCDWARE will poll each site after an approximately 30 second delay.

Repeat All Call 3 times

Check this option to enable all call repeats. The delay between repeats is configured using the "Retry Delay" parameter on the System setup screen. Note: This setting overrides the "Repeat All Call 3 times" setting on the System setup screen.

Dynamic Digital Voice

The Dynamic Digital Voice list displays a list of digital voice messages to be played back during the DYNAMIC VOICE function. Messages are annunciated in sequence, starting with the first message in the list and ending with the last. Up to a maximum of 20 messages may be programmed. If dynamic voice is not used, this list may be left blank.

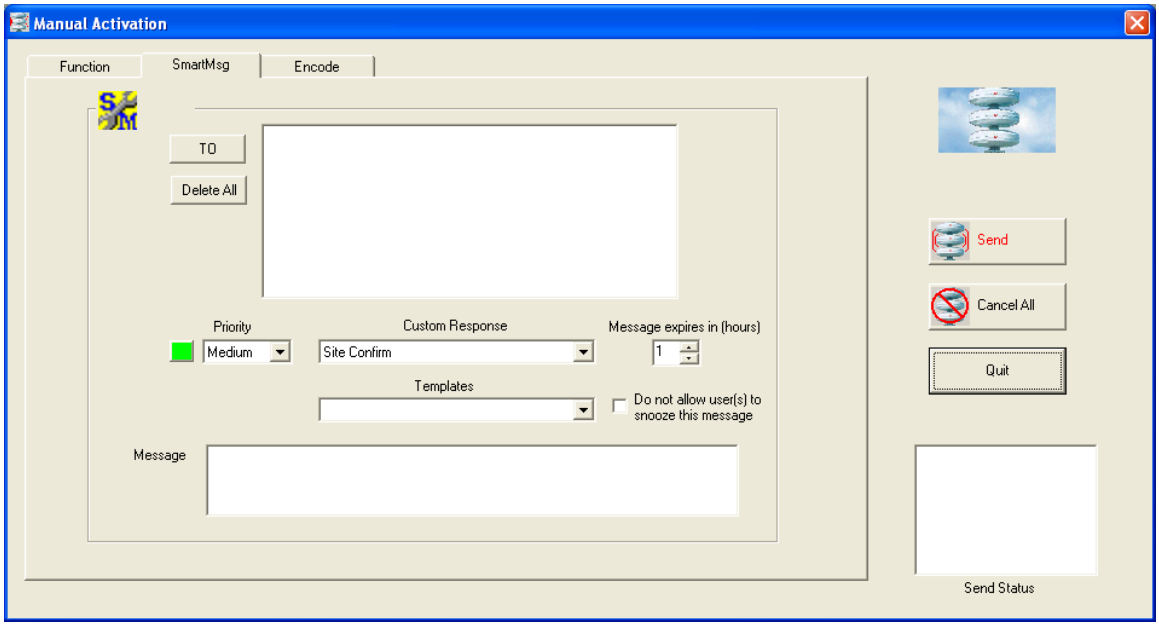
To add a message click the add button and select the desired message from the dropdown list. The message will be placed just under the currently selected message. To delete a message, double click on the message.

Note: Dynamic Digital Voice messages are contained in the “voice.txt” file located in the SFCDWARE folder. These messages must correspond to the vocabulary chip installed in the sirens.

SmartMsg Tab

The SmartMsg feature is only available if a SmartMsg server has been configured (System Setup).

The SmartMsg tab allows the configuration of a SmartMsg to be sent during a Manual Activation.



Templates

Templates selects a preconfigured SmartMsg on the Codespear server. To select a template, highlight the desired template in the drop down list. When a template is selected, all other fields are not applicable and disabled.

Custom Response

Custom response allows the recipient to respond to a survey upon receipt of the SmartMsg. The survey results may be analyzed using Codespear software. To select a Custom Response, highlight the desired Custom Response in the dropdown list.

TO

Message recipients can be selected by clicking the Select Users button and selecting recipients from the object selection form that appears.

Delete All

Removes all users and groups from the list.

Priority

The three message priority levels are High, Medium and Low. Each message is assigned one of these priorities. Smart Messages will not be sent if the priority setting is set to Disabled.

Message Expiration

Each message is assigned a time to expire.

- It is no longer delivered to any recipients.
- It is moved to the expired area of the database.
- It can be archived from the system by a Global Administrator.

Snooze Option

A snooze option is available which allows recipients to delay acknowledging the message. This feature is available by default. The user can click the "Snooze" button on the pop-up alert that appears on computer desktops to minimize the message for a short period of time. This allows a user to delay reading the SmartMsg message while finishing current tasks at hand. The message will then reappear on top of all other applications again after the user's set snooze interval. (The user's Message Snooze interval can be set between 30 seconds and 128 minutes. It is set via Settings—Profile in the SmartMsg Client). For messages that are immediately critical, a sender can choose to disable the snooze option.

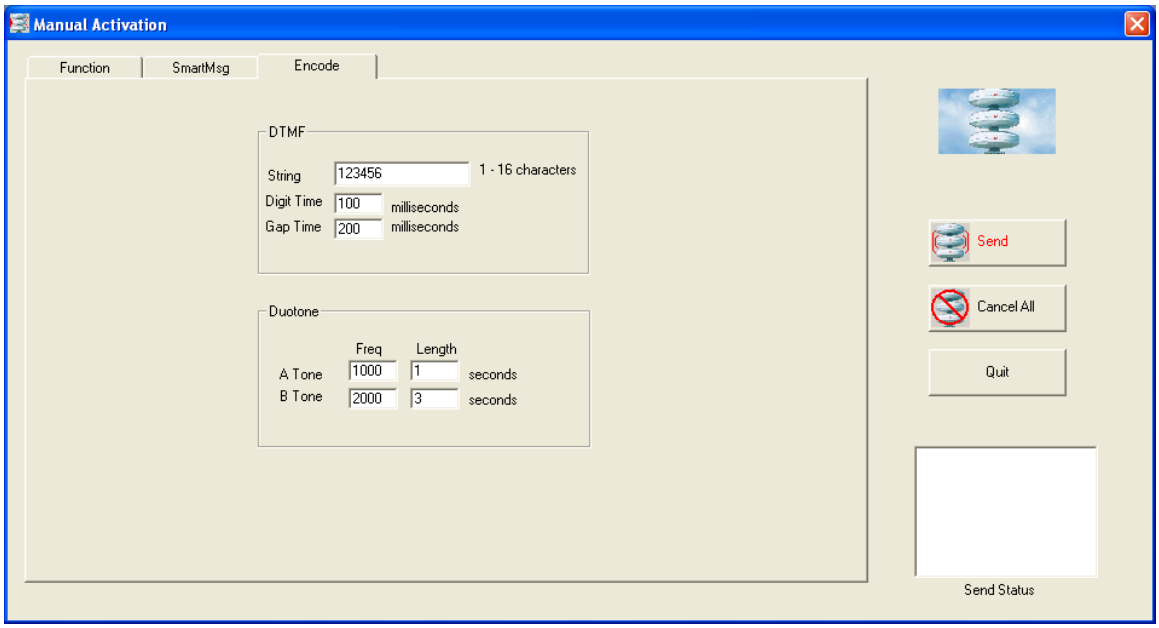
Message

Type the body of the message in the textbox provided.

Encode Tab

The Encode feature requires the MSK Modem and is not available when the Communication Mode is set to SS2000.

The Encode option allows DTMF and/or Duotone transmissions to be sent during a Manual Activation.



DTMF

String:

The string may be from 1 – 16 characters and must be valid DTMF characters (0-9, A-D, *, #).

Time:

The valid range for Digit Time and Gap Time is 1 - 999 ms. The Federal Signal standard is 100ms for Digit Time and 100ms for Gap Time.

Duotone

ATone and BTone:

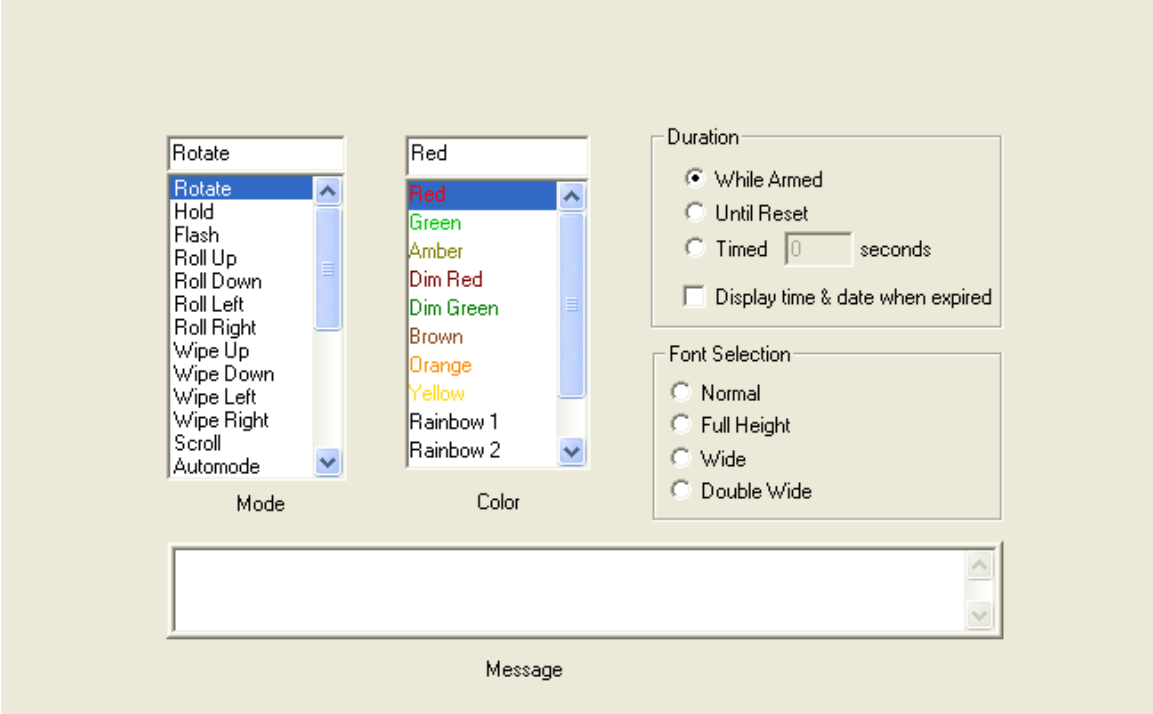
The valid range for ATone and BTone is 300 – 3000 Hz.

Length:

The valid range for Length is 0.1 – 9.9 seconds.

Display Tab

Informer-IP type units contain a Display tab to configure the operation of a scrolling message display. The scrolling message display is an optional accessory that may be attached to the Informer-IP for the display of text messages on a large overhead LED display.



Mode

The mode selection configures how the message will be displayed.

Color

Sets the color of the displayed text

Duration

Sets how long the message will be displayed:

- While Armed: Message will be displayed while the unit is armed. Choose this option if it is desired to display the message for the duration of function activation
- Until Reset: This option will display the message until a Master Reset command is sent or the Reset button is pressed
- Timed: Display message for a fixed time duration

Display time & date when expired

Check this option if it is desired to display the time & date during standby. If this option is not selected the display will be blank during standby.

Font Selection

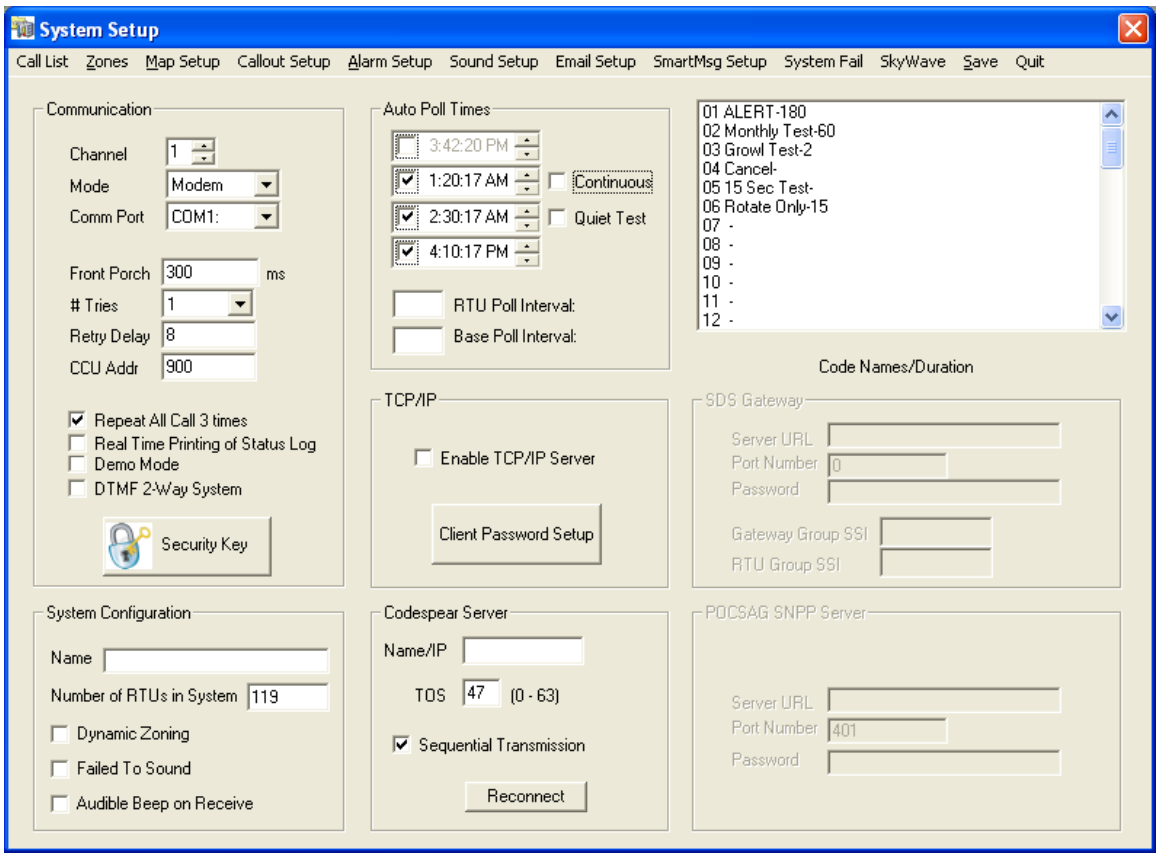
- Normal: Standard height and width
- Full Height: For multiple line displays the height is adjusted to the full height of the display
- Wide: Characters displayed slightly wider than the standard font
- Double Wide: Characters displayed double the standard width

Message

Type the message to display in the Message box .*For maximum attention getting keep messages short and to the point.*

System Setup

After selecting System Setup from the SFCDWARE System window, the following dialog is displayed:



AVAILABLE MENU ITEMS:

Call List

Select this menu item to start the Call List maintenance function.

Zones

This selection displays a dialog for configuration of RTU zones.

Map Setup

This selection displays a pop up window used to add or remove bitmap files for display on the interactive map screen.

Voice Setup

This selection displays a dialog for the setup of voice call-out parameters.

Alarm Setup

Displays a dialog for configuration of Alarms. Alarms are activation commands scheduled to occur on a daily, weekly or monthly basis.

Sound Setup

This selection displays a dialog for configuration of system sounds. System sounds are attention getting signals sounded in response to alarms and other events.

Email Setup

Displays the Email Setup dialog.

SmartMsg Setup

This selection displays a dialog for configuration of the SmartMsg connection parameters and System Log filter.

System Fail

Displays the System Fail setup dialog.

Save

Select this menu item to save any changes and close the Status of Base window.

Quit

Select this radio button to quit the Status of Base window without saving changes.

AVAILABLE DATA ENTRY FIELDS:

Communication:

Channel

SFCDWARE supports up to four communication channels. Each channel is assigned a Mode and Com Port number (if applicable). Utilizing multiple channels allows SFCDWARE to support multiple communication modes. It is important to remember the following limitations when using multiple channels:

- Codespear mode is limited to channel #1
- The Com Port setting must be unique for all channels (do not share com ports)
- Data is received and sent to all channels simultaneously.

Mode

Selects the type of communication interface SFCDWARE uses to communicate with the sirens. The available selections are:

1. SS2000
2. Modem
3. Codespear (Codespear)
4. Tetra
5. SkyWave

To change the current selection, point & click on the radio button; each time the radio button is pushed, the display will scroll through the possible options, one at a time.

The following features are dependant on the Mode selection:

- PA (VOIP): Only available when Mode = Codespear or Modem
- DTMF and Duotone Encode: Only available when Mode = Modem

Communication Port

The Communication Port selection is available only for “SS2000” and “Modem” modes.

This setup option determines which serial port on the SFCDWARE computer will be used to interface with the SS2000D or modem that is used to communicate with the RTUs. The possible options are COM1, COM2, COM3, and COM4.

To change the current selection, point & click on the radio button; each time the radio button is pushed, the display will scroll through the possible options, one at a time.

Front Porch Time

The Front Porch Time selection is available only for “Modem” mode.

Front Porch is the dead time between transceiver PTT (Push To Talk) and the start of data transmission (0 – 9999 ms).

Number of Communication Retries

This setup option determines how many times the CCU will try to contact an RTU before considering the communication attempt to be a Comm Fail. The CCU will wait between tries the number of seconds indicated by Retry Delay. Retires may be set to a minimum of 1 and a maximum of 3.

To change the number of retries, point & click on the radio button. Each time the radio button is pushed, the display will rotate to the next higher number, up to a max. of 3, at which point the numbers will restart at 1.

Retry Delay

This setup option determines how many seconds to wait between attempts to contact an RTU. For Program commands 10 seconds will automatically be added to the retry delay. This will prevent the lengthy program command from causing a Com Fail.

The format of this data entry field is from 1 to 99 seconds. To change the Retry Delay, highlight the current retry delay number and enter a new number. The setting of this parameter is dependent on the radio system infrastructure, however 10 is an optimum setting for most systems.

CCU Address

This setup option assigns the CCU site address. The valid address range is 900-909. Primary CCU sites are 900-904 and secondary CCU sites are 905-909.

A complete SFCDWARE system may contain multiple base stations (CCUs and/or SS2000Ds). Each base station is addressed as a Primary or Secondary site. RTU initiated transmissions (e.g. Intrusion, Power Fail) are sent to the last Primary base station to initiate communication with the RTU. RTU initiated transmissions are acknowledged only by this Primary base station. Secondary base stations and all other primary base stations will receive and log all RTU transmissions even though they will not acknowledge these transmissions.

A typical system consists of one Primary base station for system management, and several secondary sites used as remote activation points.

Repeat All Call 3 Times

When enabled (checked), All Call and Zone activation transmissions will be sent three times. When disabled, All Call and Zone transmissions are sent just once. Normally this should be enabled to decrease the likelihood of noise on the channel causing a missed activation. If multiple transmissions are causing a problem with live PA, disable this feature. It may also be necessary to disable this feature when all call repeaters are used if there is not enough time between repeats for the repeat sequence to complete.

Note: This setting does not affect programmable hotkeys. Hotkeys have their own “Repeat All Call 3 Times” setting which may be independently configured for each hotkey.

Demo Mode

When enabled all activation transmissions are suppressed. This function allows training and demonstration without the possibility of sounding the sirens. When Demo Mode is enabled, the phrase "Demo Mode, Will Not Activate!" will appear at the top of the screen to alert operators the system is not available for activation.

Warning! If Demo mode is enabled, the system will not transmit activation messages if called upon in an emergency. This mode should be used for training and demonstration purposes only.

Real Time Printing of Status Log

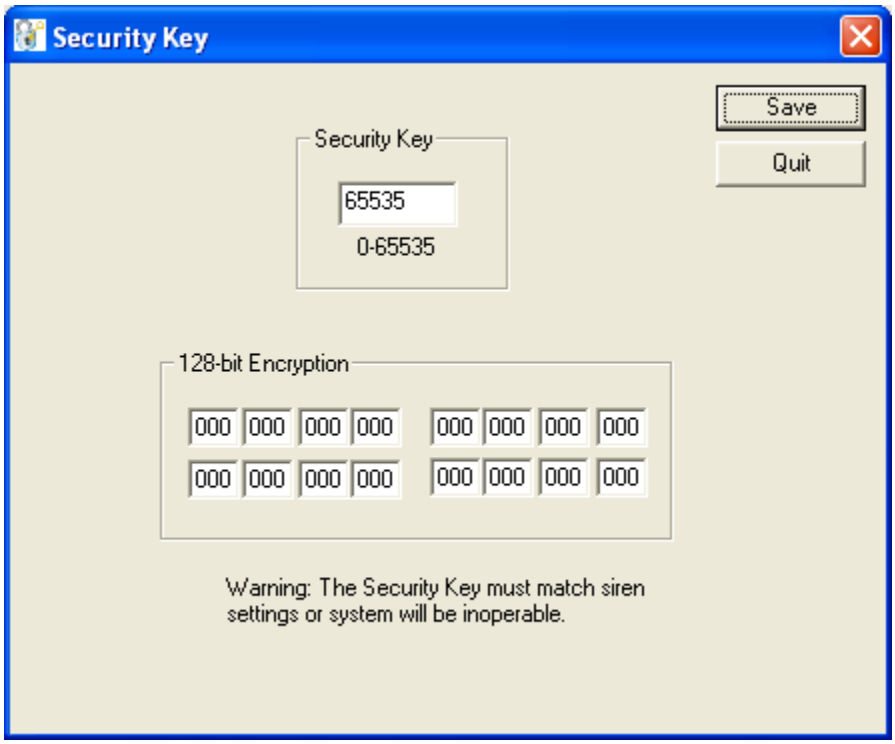
When enabled, all system log entries will print on the printer as they occur. Note: This option requires a dot matrix or line oriented printer. Do not use page printers such as Laser or Ink Jet printers with this option.

DTMF 2-Way System

Check this option *only* if SFCDWARE is being used to program a 2-Way DTMF system.

Security Key

Click this pushbutton to change the value of the Security Key and/ or 128-Bit Encryption Code. The following dialog will pop up:



The Security Key is a 16-bit code (0-65535) that is programmed into each RTU and base station (SS2000D and SFCDWARE Computer). The RTU and base station security key must match for successful communication. The RTU security key is programmed during initial programming of the RTU's software or by performing "Update RTU Software". If the RTU and base station security keys do not match, a communication fail error will occur. This feature helps prevent unauthorized system access and activation. It also prevents cross talk from a neighboring system operating on the same RF channel. Older versions of RTU software that do not have the Security Key feature will always communicate successfully. A key value of 65535 is defined as an "open" system. Base stations and sirens programmed with this value will communicate with any other siren or base station regardless of it's key value.

The 128-Bit Encryption Key accomplishes scrambling of the data transmission. Like the Security Code, the 128-Bit Encryption Key is assigned to each node in the system and must be the same for successful communication. There is no "Open" setting and the key value must always match. A setting of zero disables encryption and should be used for compatibly with older units that do not support 128-bit encryption.

Normally the Security Key and 128-Bit Encryption Code is set at system commissioning and not changed again. In the rare event that it becomes necessary to change, all sirens in the system must be updated by performing "Update RTU Software". This change should only be done by authorized personal. Note: Changing the Security Key or 128-Bit Encryption Code could cause your system not to activate during an emergency.

Enter the values and click OK to save or quit to close the dialog without saving.

System Configuration

Name

The “Name” field allows each seat of SFCDWARE to be assigned a name. This field may be up to 49 characters in length and will appear in the subject heading of EMAILS and Smart Messages.

Number of RTUs

The format for this data entry field is from 1 to 3 digits, in the range of 1 to 255. To change the number of RTUs, highlight the current number of RTUs, enter a new number, then point & click on the Save radio button to save the new number.

This setup option determines how many RTUs the SFCDWARE System will manage for this installation.

Dynamic Zoning

This option selects the zone activation mode. When enabled zone activations will be sent using dynamic zoning. When disabled zone activations will be sent using conventional or legacy zoning.

Dynamic Zoning is a method of embedding selected sites in the activation command at the time of transmission. Dynamic zoning does not require sites to be preconfigured as to which zone(s) they reside in. This allows for more flexibility in zoning and the ability for zones to be created on the fly without reprogramming remote sites.

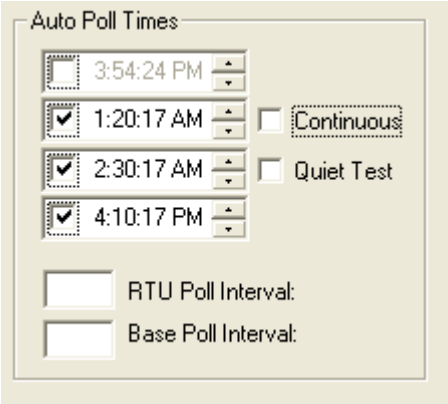
Dynamic zoning requires all sites in your system to support the Dynamic Zoning mode. If one or more sites is running legacy firmware that does not support dynamic zoning, dynamic zoning must be disabled.

When Dynamic Zoning is disabled conventional or legacy zoning will be utilized. Conventional zoning is limited to a maximum of 16 zones and sites must be preprogrammed with their zone configuration.

Dynamic Zoning requires RTU firmware fcm v5.3 or uvh v7.3 or later. *Using dynamic zoning on legacy RTUS will result in a failure to activate.*

Auto Poll Times

Four fixed daily automatic poll times are available:



Automatic poll times indicate at what times of the day, every day, that the SFCDWARE System will automatically poll all active RTUs. From none to four different times of day can be entered. To

indicate that any one of the four time slots is NOT to be used, uncheck the checkbox adjacent to the respective time setting.

If the **Continuous** check box is checked, the system will poll continuously regardless of automatic poll times.

Interval and Interval Base polling

Interval polling allows polling at a fixed interval. To enable interval polling, enter the desired polling interval in minutes in the Interval text box provided. Base Interval polling allows a separate polling interval to be specified for unit if type “BASE”.

If **Quiet Test** is checked, an All Call Quiet Test will be sent before each automatic poll sequence is started.

The automatic polling modes are mutually exclusive. If Continuous polling is enabled, Interval and the four fixed time fields will be disabled (grayed out). If Interval polling is non zero, continuous and the four fixed time fields will be disabled. To turn off interval polling clear or set the interval polling text field to zero.

Note: It is recommended that the system be polled at least once a day to keep the system in time sync and to verify system communication and status. This helps to ensure any problems can be detected and corrected and your system is ready in the event of an emergency.

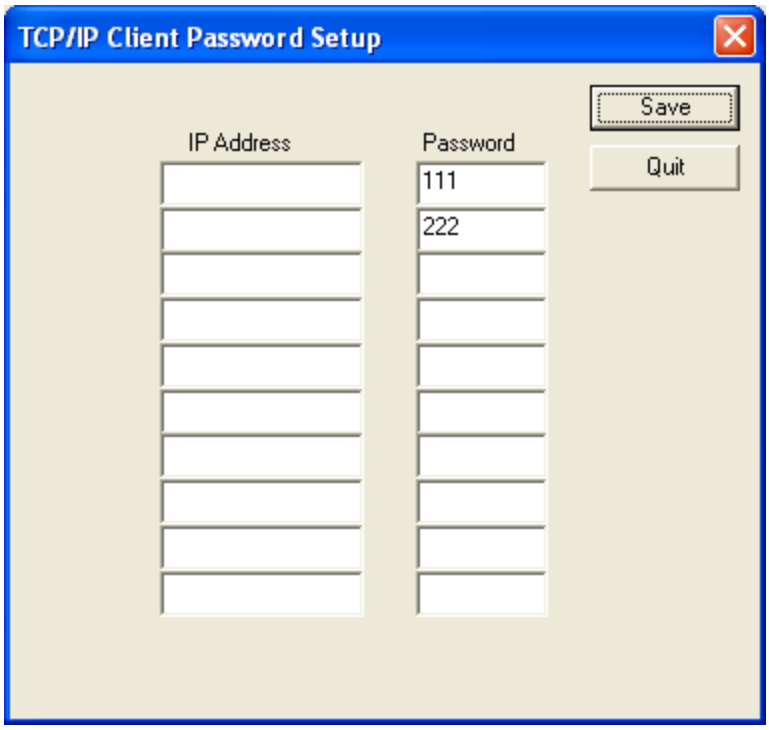
TCP/IP

Enable TCP/IP

Checking the **Enable TCP/IP Server** checkbox allows client versions of SFCDWARE to connect and communicate with the server. Client versions of SFCDWARE allow the system to be operated from a remote location over the Internet or Local Area Network supporting the TCP/IP protocol.

Client Password Setup

To prevent unauthorized access, client versions of SFCDWARE will prompt the operator for a password before a connection with the server is made. Up to ten passwords may be assigned. Passwords are setup by clicking on the Client Password Setup push button. The following dialog box will drop appear:



Client passwords may consists of 1-19 characters and are case sensitive. Click “Save” to save changes and close dialog. Click “Quit” to close dialog without saving changes.

IP Address

For security, only clients that appear in this list will be able to connect. Enter the clients IP address in dotted decimal format. If the first IP Address field is left blank, the system is open and all client connections will be accepted.

All passwords are applicable to all IP Addresses.

Codespear Server

The Codespear Server items are only enabled when the mode selection is set for “Codespear”.

IP

Set the IP address of the Codespear server. This must match the Default Server setting assigned to SFCDWARE (Ref: Codespear SmartMsg Deployment Guide).

TOS (Type Of Service)

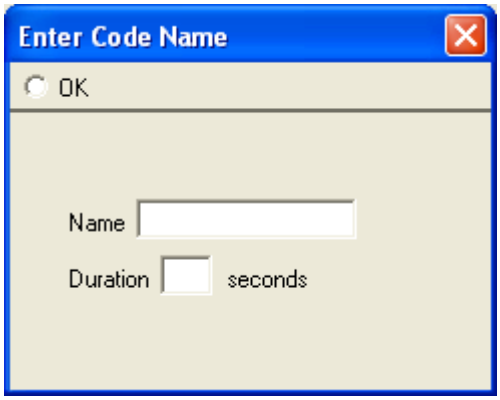
The TOS setting for SFCDWARE – Codespear communication; enter 0-7 if using IP TOS Precedence (RFC791) or 0-63 if using DSCP (RFC2474).

Code Names

The Code Names list box is used to assign names to activation codes for the various codes programmed into each RTU (Siren Controller). This name applies to all RTUs in the system. To

add or change a Code Name, double click on the desired code number. The following dialog box will be displayed.

The names assigned here are for descriptive purposes only, and do not have any bearing on the programming of activation codes.



Enter the name to assign this code and the signal duration, then click on the OK radio button. Note: The duration here is used to control the length of time the siren icon on the Activate screen will animate when the activation command is sent. This is not the actual duration the remote sirens will sound -- this is set up in the Configure RTU screen for each individual RTU.

If PA is placed in the name and duration fields, PA Active will flash on the screen for ten seconds after the activation message is sent to alert the operator that the sirens are ready for live PA announcement.

Pocsag Server

The Pocsag server feature allows siren activations to be automatically sent to a POCSAG paging server using the SNPP protocol. This feature is optional, and will be active only on system with a valid license key supporting the Pocsag Server option.

Federal Signal POCSAG format:

[nnnff]

nnn = siren number
- 1 – 255 = individual activation
- 300 = All Call.
- 301 – 316 = Zone Activation (301 = zone1, 302 = zone2 . . . 316 = zone16)

ff = function number (1 – 50)

Example SNPP activation:

1. SFCDWARE connects to the server on the selected port.
2. Server: “220 SR Server Ready \r\n”. (welcome message)
3. SFCDWARE: “sr 300\r\n” (Siren number)
4. Server: “250 SR ID Accepted” (confirmation message)
5. SFCDWARE: “fn 01” (function number to activate)
6. Server: “250 Function 01 : 300” (confirmation message)
7. SFCDWARE: “MyPassword” (password)
8. Server: “250 Password Accepted” (confirmation message)

Server URL

Specify the URL address of the SNPP POCSAG server. This field must be left blank if the POCSAG server option is not used.

Password

Specify the password provided by the SNPP service provider.

Port Number

Specify the port number provided by the SNPP service provider.

SDS-Gateway

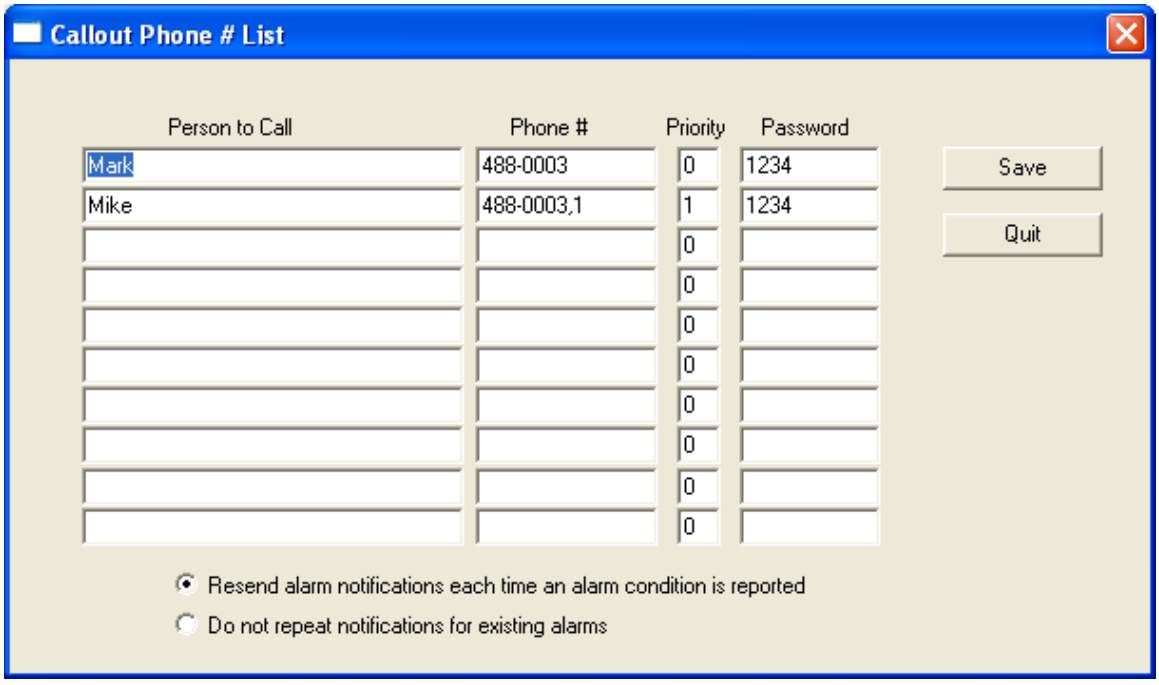
The SDS-Gateway fields are applicable for systems using the Tetra communication mode.

Server URL:	IP address or DNS name of the SDS-GW server network connection
Port Number:	Port number of the SDS-GW network connection
Password:	Password of the SDS-GW network connection

Gateway Group SSI:	Tetra group SSI number of the SDS-GW
RTU Group SSI:	Tetra group SSI number for RTU sites

Call List

After selecting Call List from the Status of Base Unit menu, the following screen is displayed.



The Call List screen will be displayed within the Status of Base Unit window and will overlap any

other SFCDWARE System window already displayed.

Save

This setup selection saves any and all changes made to the Call List. If changes are made to the Call List and not saved with this selection, they will be lost. Normally all changes are made to the Call List and then this Save radio button is selected to save all the changes at once.

Quit

This selection will terminate the Call List function.

Person to Call

The format of this data entry field is from 1 to 20 alphanumeric characters. To change any one of the names on the Call List, highlight the current Person to Call, then type in the new entry.

Phone #

The format for this data entry field is from 7 to 14 digits or commas. To change any phone number, highlight the current phone number, then enter a new phone number.

This data entry field contains the phone number of the key support person (or beeper) to be called. A valid phone number consists of numbers and optionally commas. A comma will cause the dialing function to delay about two seconds before continuing on to the next number in the phone number. This feature allows Call-out to use some kinds of internal phone systems that require dialing 9 (or some other access code) to get an outside line, and then waiting a fixed amount of time before attempting to dial the actual phone number.

Priority

The format of this field is any single digit between 0 and 9. To change any priority number, highlight the current priority number then enter a new priority number.

This parameter is used to determine the order or numbers to call during alarm call out.

The first priority number used is 0, the second priority number is 1, etc., with priority number 9 being the last phone number on the list to be called. If during the course of attempting to originate a Call-out, the CCU reaches the "end" of the Call List, the CCU will start over at the beginning of the Call List, or priority number 0. A priority 0 number must exist for the Callout feature to operate.

It is valid to change just the priority numbers of persons on the Call List in order to change the Calling order instead of having to enter the entire Call List again.

NOTE: The CCU keeps track of whether or not a person reached during a Call-out operation acknowledged any alarms. If that person Acknowledges any alarm, the Callout sequence is terminated until the next Alarm event occurs. If that person did NOT acknowledge at least one alarm, the CCU will automatically call the user with the next higher priority number that exists in the Call List.

Password

The format of this field is from none to 10 digits, from 0 to 9. ONLY NUMBERS ARE ALLOWED. To change any password, highlight the current password, then enter a new password.

This parameter is the numerical password that a person must enter when attempting to respond to a call from the SFCDWARE System, or when a person is Call-ing into the SFCDWARE System. During a Call-out, only the password associated with the phone number called is allowed. During Call-in, any of the passwords on file will be accepted as a valid password.

Resend alarm notifications each time alarm condition is reported

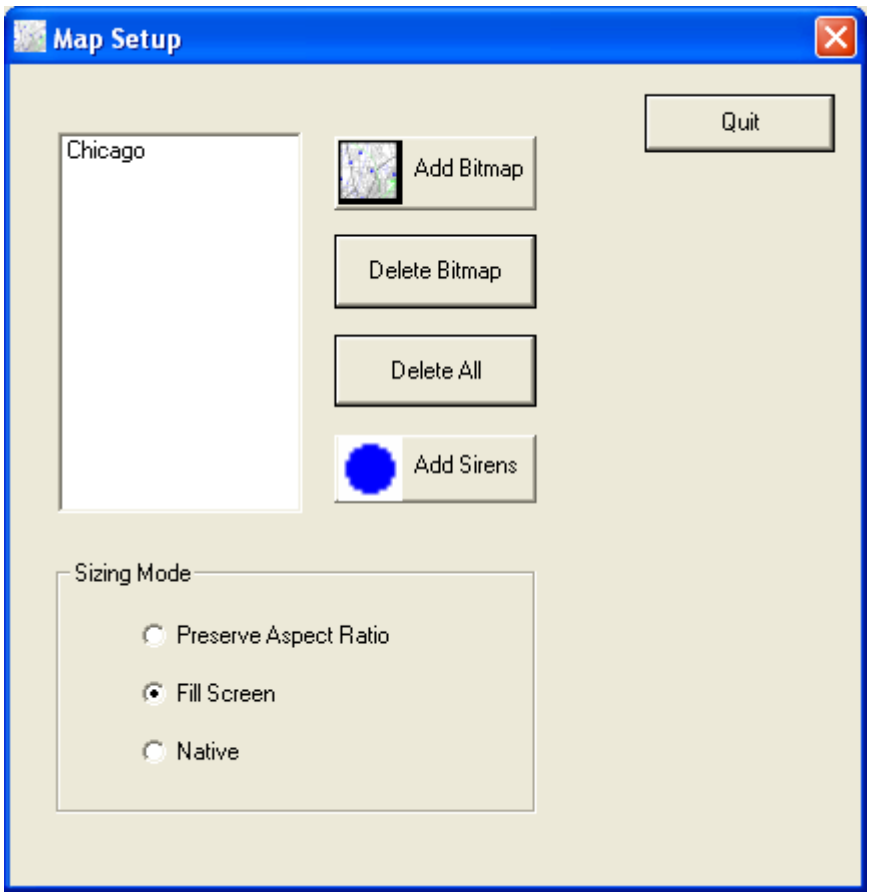
Select this option if it is desired to callout RTU alarms each time an alarm condition is reported. RTU alarms are reported each polling cycle.

Do not repeat notification for existing alarms

Select this option to callout only new alarms. This will prevent notification of the same alarm each time the system is polled.

Map Setup

This selection is used to configure a list of bitmaps for display on the interactive map screen. After making this selection, the Map Setup dialog box will pop-up:



RTU dot locations linked to host (SfcdwareClient Only)

This selection will cause siren dot locations to be linked to the host. Select this option if the screen resolution of the client is the same as the host. *Recommend setting.*

RTU dot locations independent of host (SfcdwareClient Only)

If the screen resolution of the client is not the same as the host, siren dot locations may appear in the wrong location. This option will allow clients to place siren dot on the map independent of the host. *Use this option only if it not possible to use the same resolution setting as the host.*

Preserve Aspect Ratio

Preserve the aspect ratio of map when it is resized to fit your monitor.

Fill Screen

Resize the map to fill the entire screen. This setting may result in distortion if the aspect ratio of the map is different than your monitor.

Native

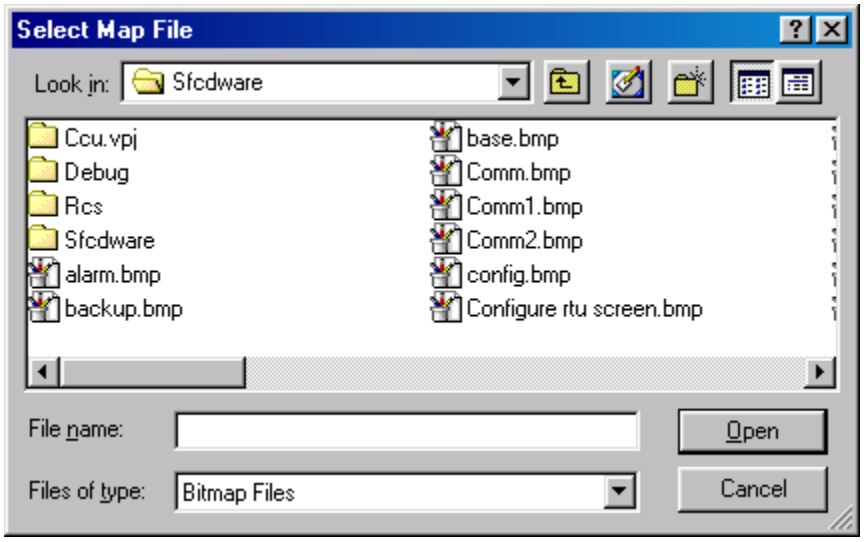
Native mode displays the map in its native size and will not be resized to fit the screen. This option should not be used unless the bitmap files are very close in size to the resolution of your monitor.

Image Quality

For best quality bitmap files should be larger or equal to the resolution setting of your monitor. Files that need to be expanded to fit the screen will result in a poor quality image.

Add Bitmap

To add a bitmap to the list of maps for display on the interactive map screen, click the Add Bitmap button. The following dialog box will pop-up:



Highlight the desired file using point and click. Click **Open** to finalize your selection.

Note: Map files must be located in the SFCDWARE working directory. If the desired map filename does not appear in your SFCDWARE directory, use Windows Explorer to copy it into this directory. If an attempt is made to select a file outside your SFCDWARE working directory, an error message will pop up.

Delete Bitmap

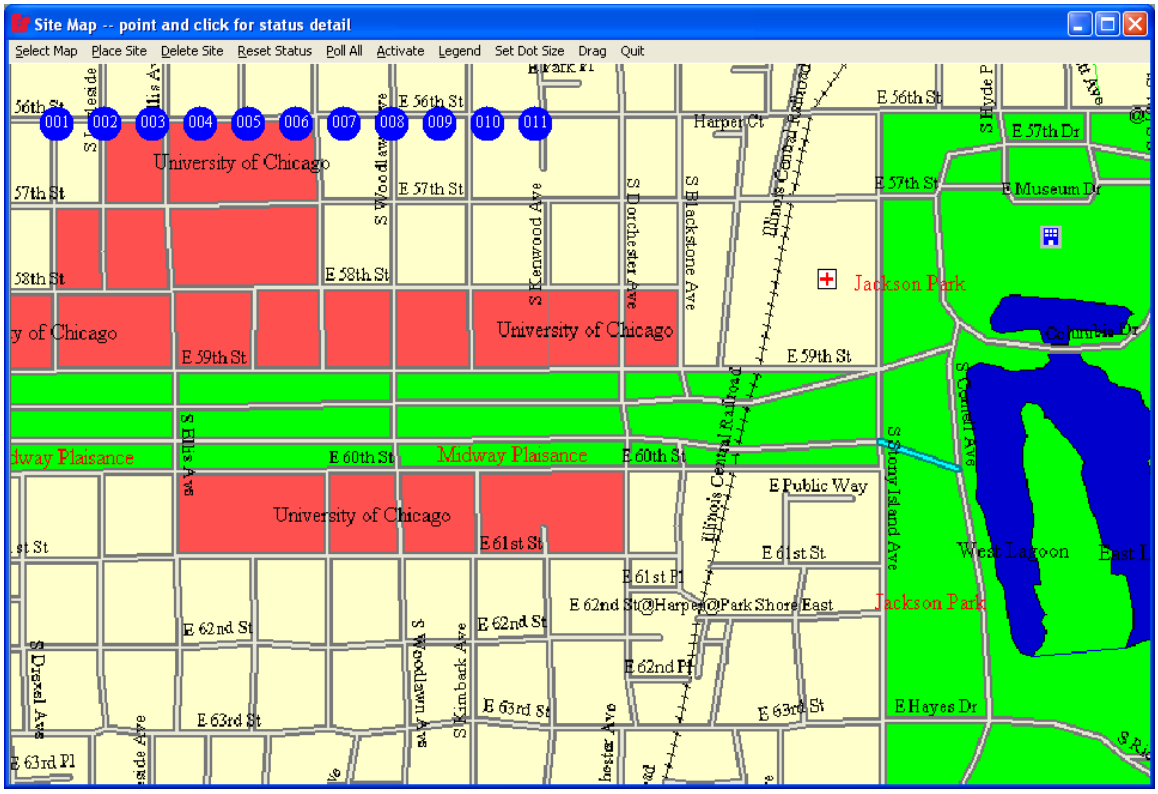
Delete Selected map.

Delete All

Delete all maps.

Add Sirens

The “Add Sirens” feature pre-populates siren dots on the selected map for all configured sirens. Highlight the desired map and click “Add Sirens”. Siren dots will be placed in a grid pattern, and may be moved using the drag feature on the map screen.

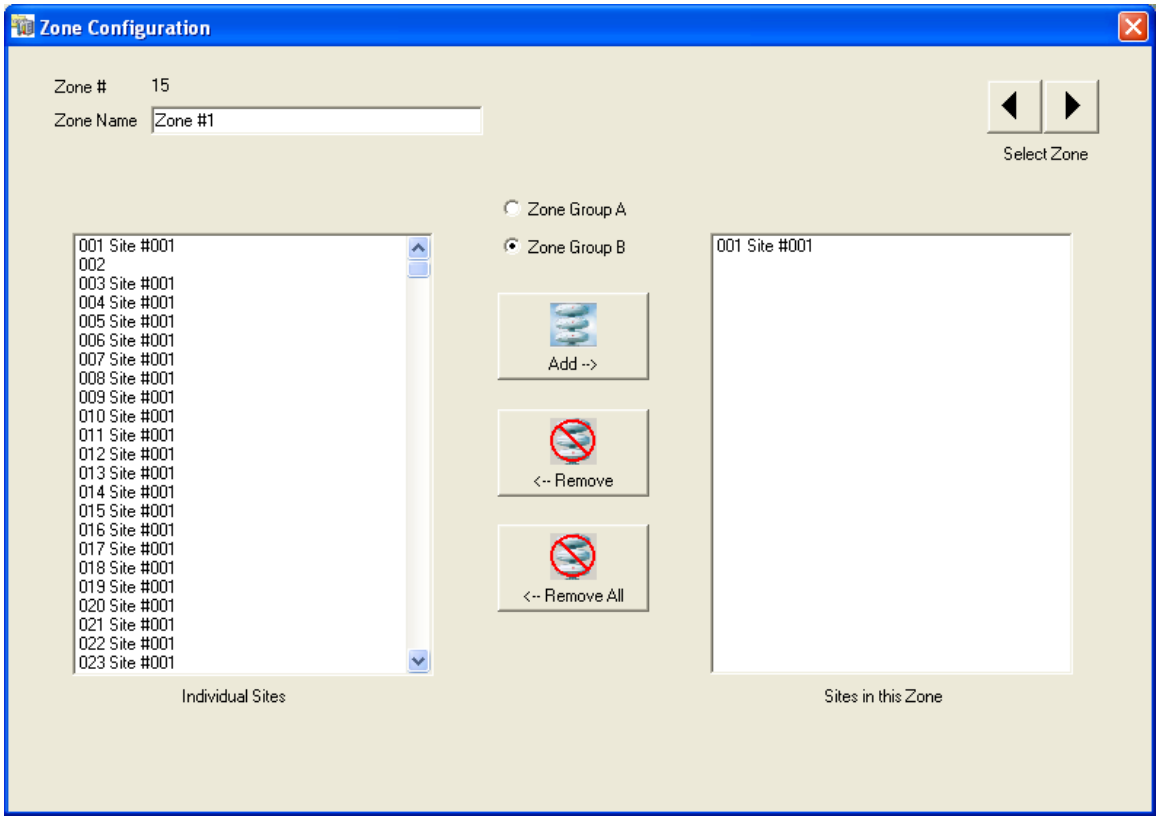


Mapping programs such as provided by DeLorme Inc. enable maps to be created easily. These bitmaps can be edited with custom text or graphics with the Paintbrush program provided with Windows. Paintbrush can also be used to convert older bitmaps to 256 color bitmaps for use by SFCDWARE by using the "Save As" command and selecting the appropriate format.

Zones

Zone Configuration is used to define which sites will be included in each of 99 zones. When

activating a zone, all sites included in the respective zone will sound. *Note: Whenever a change is made to the zone configuration, the Program block must be sent to all RTUs in the system unless Dynamic Zoning is enabled.*



Dynamic Zoning

Dynamic Zoning is a method of embedding selected sites in the activation command at the time of transmission. Dynamic zoning does not require sites to be preconfigured as to which zone(s) they reside in. This allows for more flexibility in zoning and the ability for zones to be created on the fly without reprogramming remote sites.

Dynamic zoning requires all sites in your system to support the Dynamic Zoning mode. If one or more sites is running legacy firmware that does not support dynamic zoning, dynamic zoning must be disabled.

When Dynamic Zoning is disabled conventional or legacy zoning will be utilized. Conventional zoning is limited to a maximum of 16 zones and sites must be programmed with their zone configuration.

Select Zone

Use the Select Zone spin control to select the desired zone. A maximum of 99 zones may be configured in dynamic mode or 16 in conventional mode.

Adding and removing sites

To add sites to the selected zone, highlight the desired sites in the site selection list box on the left and click **Add→**. To remove a selected site, highlight and click **←Remove**. Click **←Remove All** to remove all sites from the selected zone.

The currently selected zone configuration is automatically saved when scrolling to another zone or closing the zone setup window.

Voice Setup (Call-in and Call-out)

Call-in and Call-out are both functions that alert key support personnel to the current status of The Commander SFCDWARE System. Both functions require the use of a touchtone telephone line. Pushing the appropriate buttons on the touchtone keypad enters actions and responses to the messages announced through the voice modem. Call-in and Call-out works similar to a voice mail system. Simply listen to the voice menus and respond with touchtone digits as desired.

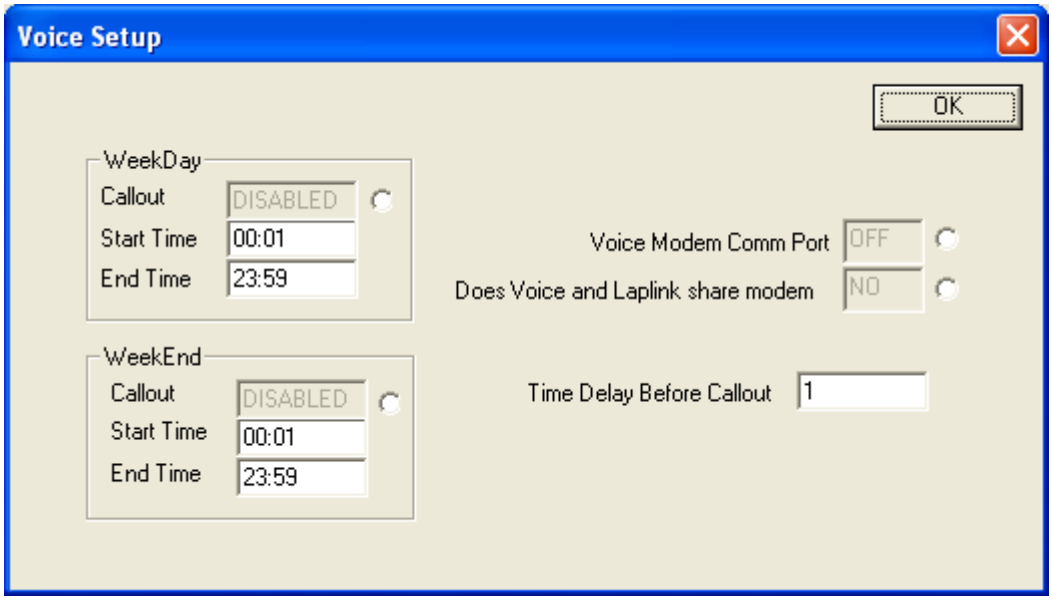
Call-in

Call-in is initiated by dialing the phone number of the line connected to the CCU. The CCU is programmed to answer the call following a programmable number of rings. The user will be prompted to enter a password before accessing the system. Any password that is currently in the call list for any username will be accepted for the Call-in function. Note: Wait for the voice prompt to end before entering password.

After a valid password is entered, the user may listen to all current alarms in the system. The user may also Acknowledge Alarms in the system.

Call-out

Call-out is initiated by the SFCDWARE System software when an alarm condition occurs that has been selected to call out (e.g. Intrusion) and is not Acknowledged or Reset before the Call-out Time Delay expires. The Call-out sequence is based on a user priority level from 0-9 with 0 being the highest priority. <u>There must always be at least one 0 level priority user to enable the Call-out feature to operate.</u> For the Call-out function, only the password associated with the phone number called will be considered valid. If the key support person who answers the call acknowledges even one alarm, the calling sequence is terminated and no other users will be called until the next Alarm event occurs. If no alarms are Acknowledged, the SFCDWARE System will initiate another Call-out in five minutes to the phone number associated with the next higher priority number, providing the Alarm that triggered the Call-out has not cleared in the meantime.



Voice Modem Comm Port

This setup option determines which hardware port on the CCU computer will be used to interface with the voice modem. The possible options are COM1, COM2, COM3, COM4, and OFF. OFF should be selected when the CCU computer does not have Creative Inc. FLASH 56K DI5630 PCI modem installed. If OFF is selected, the modem is disabled.

NOTE: You must exit and restart the SFCDWARE System for the changes of Voice Modem COM Port to take effect.

To change the current selection, point & click on the radio button to the right of the COMM PORT display box. Each time the radio button is pushed, the display will scroll through the possible options, one at a time.

Alarm Call-out ENABLED / DISABLED (Call-out)

This option determines if telephone Call-out for alarms is enabled or disabled.

Telephone Call-out is designed to notify support personal when a potentially serious alarm is reported for an RTU. In order for Call-out to actually originate a Call-out operation, several conditions must be met:

- Call-out must be enabled.
- The current time of day must be between Call-out Start Time and Stop Time (Call-out ACTIVE).
- The alarm must be present and not cleared for the duration of Call-out Time Delay (minutes).
- The call list must have at least one valid entry consisting of a name, phone number, priority number and password.

Alarm Call-out Start Time (Start Time)

The format of this data entry field is HH:MM, and any valid military time between 00:01 and 23:59. Leading zeros are required. To change the Start Time, highlight the current start time, type in the

new time to use as the Start Time, then point & click the Save radio button to save the new Call-out Start Time.

The SFCDWARE System uses this time value (along with End Time) to determine when to activate and deactivate the Call-out function. When the current time is equal to or greater than Start Time, and Call-out is enabled, Call-out will be made active.

Alarm Call-out End Time (End Time)

The format of this data entry field is HH:MM, and any valid military time between 00:01 and 23:59. Leading zeros are required. To change the End Time, highlight the current end time, type in the new time to use as the End Time, then point & click the Save radio button to save the new Call-out End Time.

The SFCDWARE System uses this time value (along with Start Time) to determine when to activate and deactivate the Call-out function. When the current time is equal to or greater than End Time, Call-out is made inactive.

Alarm Call-out Time Delay (Time Delay Before Callout)

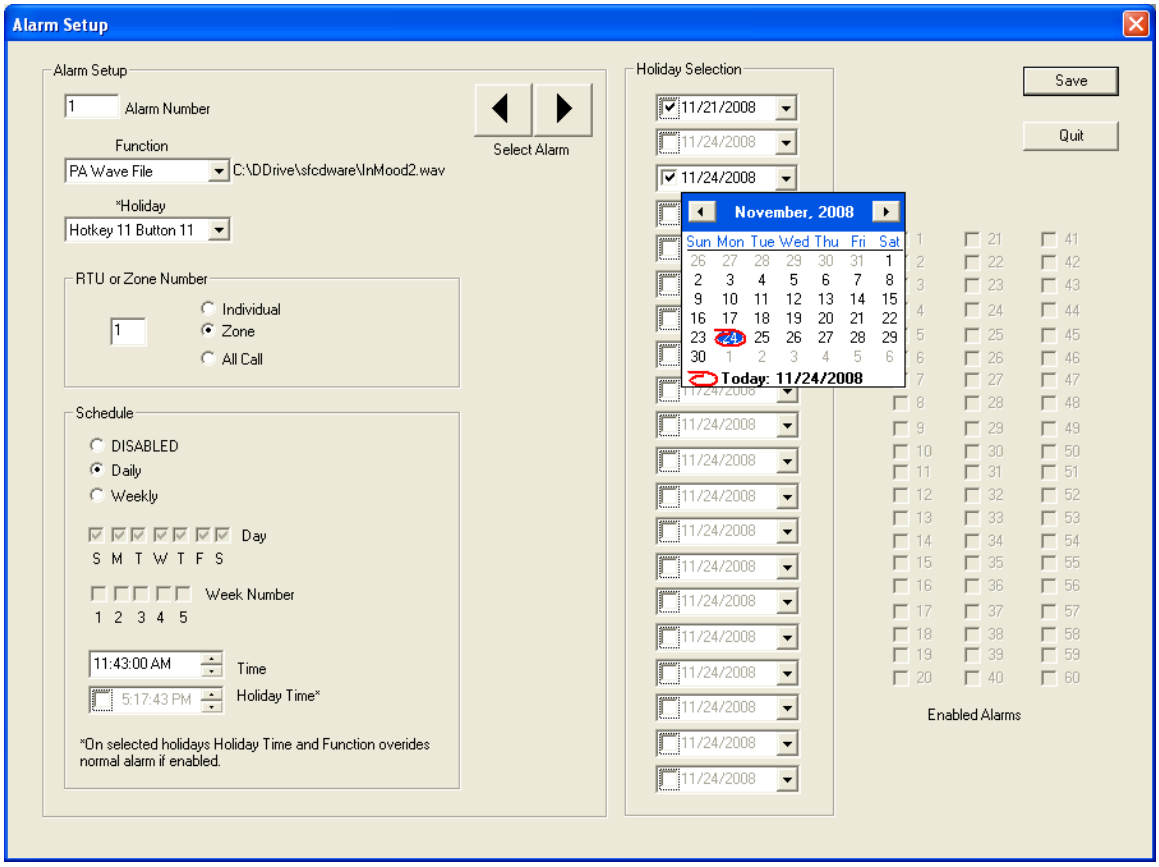
This selection applies for both weekday and weekend.

The format of this data entry field is any number between 0 and 999. To change the Time Delay, highlight the current delay time, type in the new number of minutes to use as the delay, then point & click on the Save radio button to save the new number.

This Call-out setup option determines how many minutes an alarm must be present without clearing before the SFCDWARE System will originate a Call-out operation.

Alarm Setup

Alarm Setup is used for configuration of Alarms. Alarms are automatic activations scheduled to occur on a daily, weekly or monthly basis. Holiday mode allows the normally scheduled alarm time and function to be overridden on selected holidays. Up to 60 alarms may be configured. *Note: This dialog should only be used by specially trained administrative personal. Incorrect settings in this section could cause sirens to inadvertently sound when not desired.*



Save

Click this button to save changes to all 20 alarms and close the alarm dialog.

Quit

Click this button to close dialog without saving changes. Warning: Any changes made will be lost.

Select Alarm

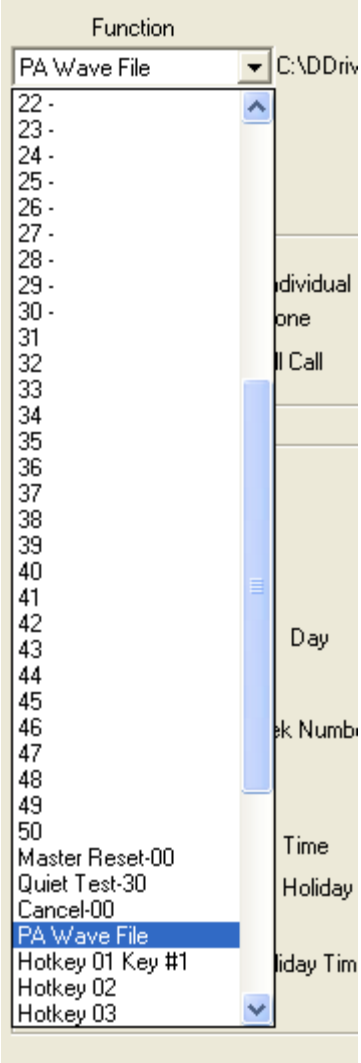
Click the spin control to scroll through the available 20 alarms. Note: Changes made to individual alarms will not be saved until the Save button is pressed.

Enabled Alarms

This pane shows at a glance which alarms are currently enabled.

Function

The **Function** field displays the function to sound for the respective alarm. To change the setting, click the arrow to drop down the list and click the desired selection.



Available Functions:

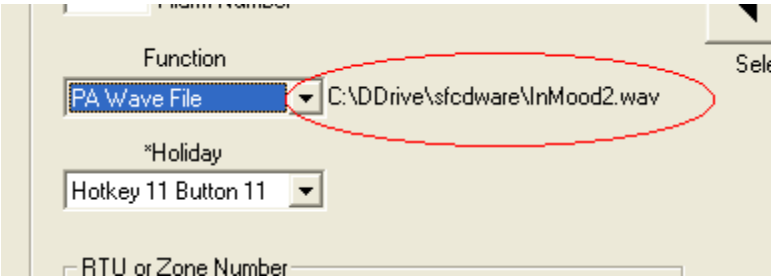
- Standard RTU functions (1 – 50, Master Reset, Quiet Test, Cancel)
- PA Wav File
- Hotkeys

The standard RTU functions execute the selected function as programmed at the RTU. 'PA Wave File" streams a wave file to the siren as public address. Hotkey functions perform the function programmed under an activation hotkey, including encode and SmartMsg if applicable.

When Hotkey is selected the site selection controls are ignored (RTU or Zone Number). The site selection is obtained from the hotkey programming.

PA Wave File

'PA Wave File' is a special function for streaming audio to the RTU as public address. When 'PA Wave File' is selected the Windows® browse dialog will appear. The selected filename will appear to the right of the Function control:



'PA Wave File' and 'PA Smartmsg' only function on channels programmed for Codespear mode or Modem mode using the Federal Signal MSK Modem (2005249). Do not use these functions on channels programmed for SS2000. When using Modem mode with the MSK Modem, program #1 of the UltraVoice must be programmed as:

ARM
PA OUTPUT
DISARM

Holiday Function

The Holiday Function will override the normal function on selected holiday dates. *See Holiday Time below.*

RTU or Zone Number

This field selects which RTU(s) will sound for the respective alarm. To change selection, click on the desired radio button (Individual, Zone or All Call). For Individual and zone modes, enter the desired site or zone number in the Textbox provided.

When Hotkey is selectedfor the Function or Holiday Function, these site selection controls are ignored. The site selection is obtained from the hotkey programming.

Individual

Only RTU number selected will sound for respective alarm.

Zone

RTUs in selected zone will sound for respective alarm.

All Call

All RTUs will sound for respective alarm.

Mode

The three radio buttons **Disabled, Daily, and Weekly** select the mode of operation for each respective alarm. To change this setting, click on the desired radio button. This selection is mutually exclusive and only one mode may be selected. For Weekly mode, the desired days of the week and week number must be selected.

Disabled

This alarm is not active and will not occur at any time.

Daily

Alarm will occur on a daily basis or every day.

Weekly

Alarm will occur on the Days and Week Numbers selected below. The Week Number refers to the numerical sequence of the day within the month. Example: Week number 2 is the second Wednesday of the month, which may or may not be the second week of the month. If it is desired to sound the alarm every week, select all week numbers.

Note: Monthly mode has been eliminated and combined with Weekly Mode and Week Number selection to allow more flexibility in alarm scheduling.

Time

The **Time** field specifies the time of day the respective alarm will occur. To change the setting highlight the desired field and use the arrow keys on the right to adjust the value.

Holiday Time

The Holiday Time when enabled will override the normally scheduled alarm on selected holidays. Holiday mode is enabled or disabled by clicking the checkbox inside the Holiday Time control. *Note: If Holiday Mode is enabled the alarm will sound on all Holiday Dates regardless of the Mode setting.*

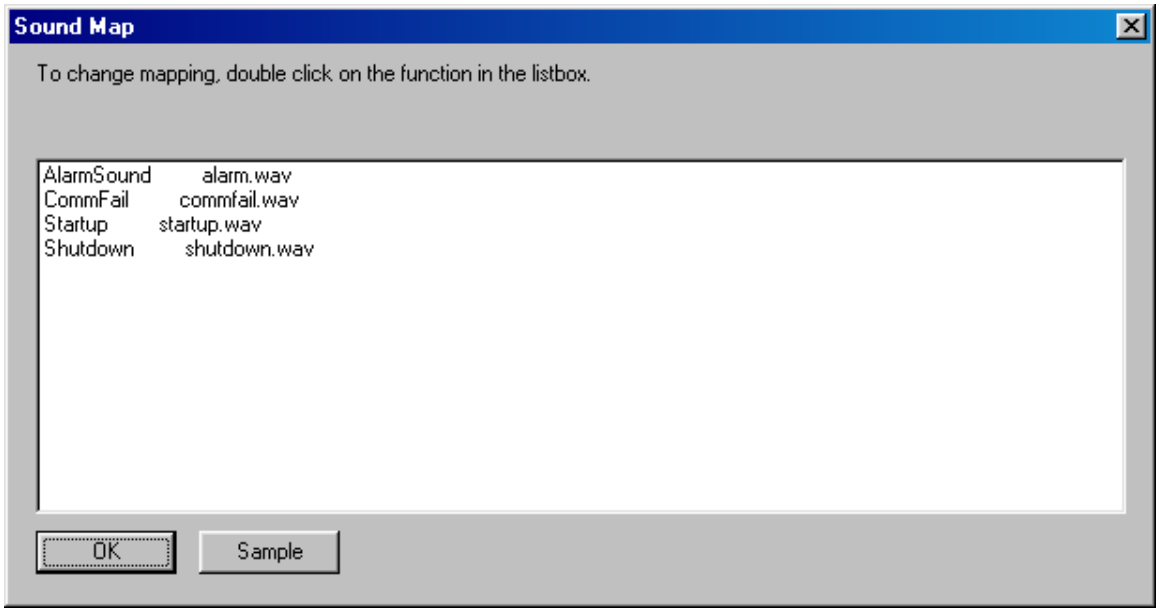
To configure an alarm to sound on only holidays set the alarm mode to Disabled and enable Holiday Time.

Holiday Selection

The Holiday Selection controls are used to designate up to 20 dates as holidays. To select a date click on the arrow on the left of the control to dropdown a calendar. Only enabled dates (checked) will be designated as active holidays. The holiday dates may be changed at anytime throughout the year.

Sound Setup

Sound setup allows the user to change the sound generated in response to certain system events. The following dialog box will be displayed:



The list box contains a list of events followed by the wav file (sound file) played in response to the event.

Alarm Sound

Sounded continuously (once every 5 seconds) to alert operators to the presence of unacknowledged alarms. This feature is enabled or disabled by a selection in the System Log screen.

CommFail

Sounded in response to a communication failure alarm.

Startup

Sounded when program is launched.

Shutdown

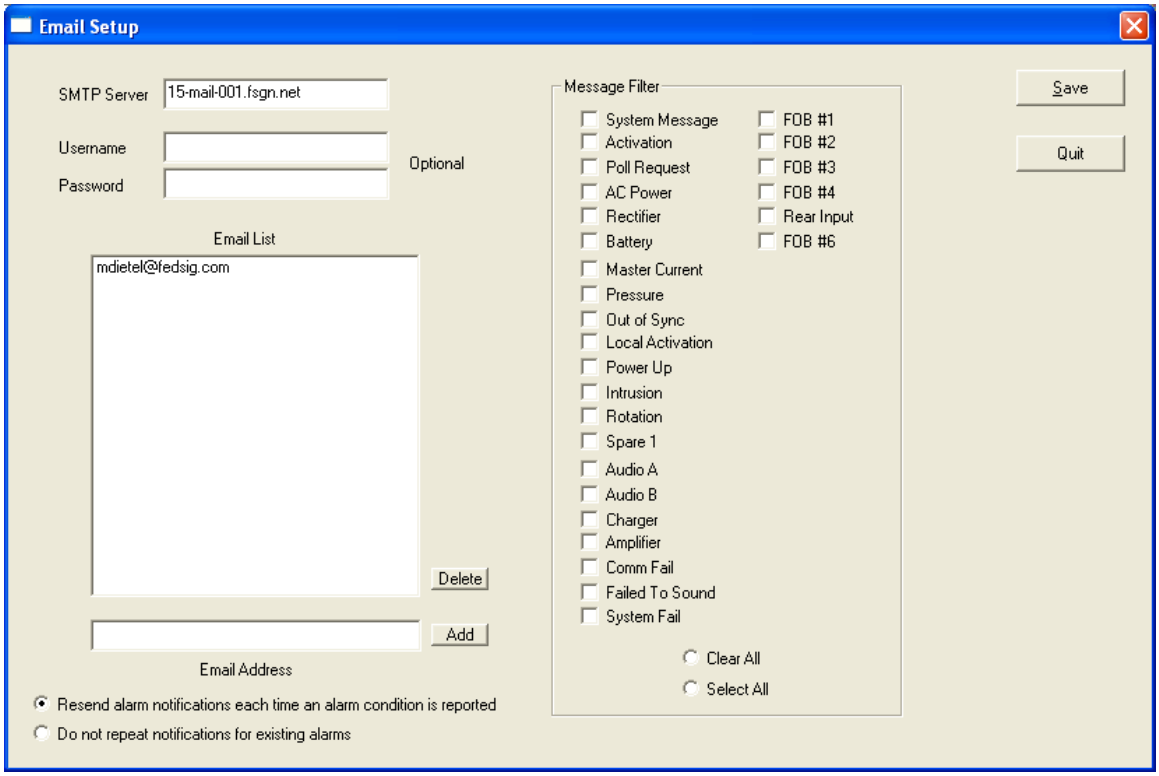
Sounded when program is shut down.

SFCDWARE is shipped with default settings for all events. To change the default setting, double click on the desired event. Select a new WAV file using the browse dialog that pops up.

To audition a sound, highlight the desired event and click on **Sample**.

Email Setup

The Email Setup dialog allows configuration of email options:



SMTP Server

Enter you SMTP server name in this field. Contact your network administrator or ISP if you do not know your SMTP server name. Your SMTP server name may also be obtained from your email program (Outlook Express) account settings.

Email List

Contains the email addresses of recipients. All recipients on the list will receive system log messages. To add a recipient, enter the new address in the Email Address box at the bottom and click Add. To delete a recipient, highlight the desired entry and click Delete or double click on the entry.

Message Filter

Use the message filter to select which system log messages shall be sent to the email list. To disable emailing, unselect all items by clicking Clear All.

Resend alarm notifications each time alarm condition is reported

Select this option if it is desired to email RTU alarms each time an alarm condition is reported. RTU alarms are reported each polling cycle.

Do not repeat notification for existing alarms

Select this option to email only new alarms. This will prevent notification of the same alarm each time the system is polled.

SmartMsg Setup

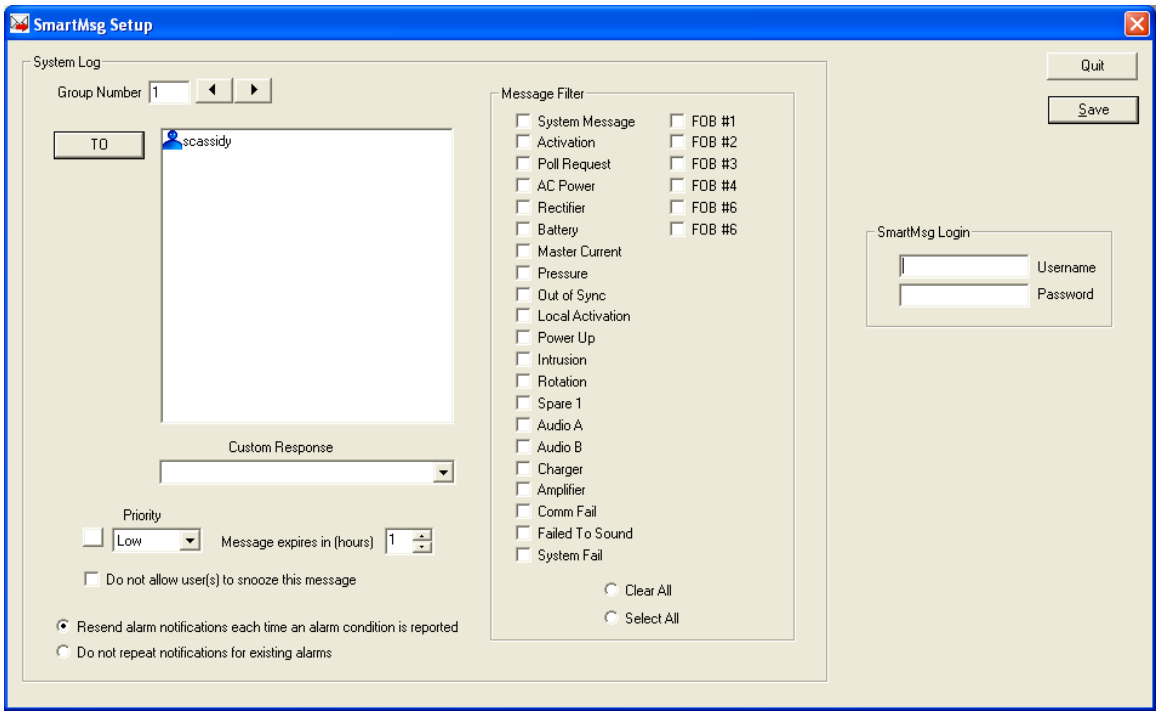
Introduction

The SmartMsg feature allows SFCDWARE to send SmartMessages on the Codespear platform. SmartMessages may be configured to be sent for the following events:

1. When an entry is added to the System Log
2. An activation hotkey is pressed
3. Manual Activation
4. Manually (File menu or Send SmartMsg button on activation screen)

SmartMsg Setup Dialog

The SmartMsg Setup dialog is used to configure the SmartMsg connection parameters and System Log filter.



Note: *The Codespear Server Name or IP Address must be entered on the System Setup screen before programming SmartMsg Setup. SmartMsg will not function if a valid Server Name is not configured.*

SmartMsg Login

Enter the username and password SFCDWARE will use when sending Smart Messages. *When making changes to the Username or Password fields, click Save and reopen the SmartMsg Setup dialog before making additional changes to the SmartMsg Setup.*

System Log

The System Log frame allows the ability to map system log messages to a group of users. When the selected event occurs, a SmartMsg will be sent to the group of users selected. Up to ten user groups may be configured.

Note: Use caution when selecting messages that may have a high incidence of occurrence.

Message Filter

Use the message filter to select which system log messages will be sent to the respective SmartMsg group.

Resend alarm notifications each time alarm condition is reported

Select this option if it is desired to SmartMsg RTU alarms each time an alarm condition is reported. RTU alarms are reported each polling cycle.

Do not repeat notification for existing alarms

Select this option to SmartMsg only new alarms. This will prevent notification of the same alarm each time the system is polled.

System Fail

Introduction

System Fail is a user configurable status point. The user determines the conditions which constitute a System Fail using the System Fail Setup dialog, available from the Status Base screen.

System fail is comprised of two components:
Individual System Fail.
General System Fail.

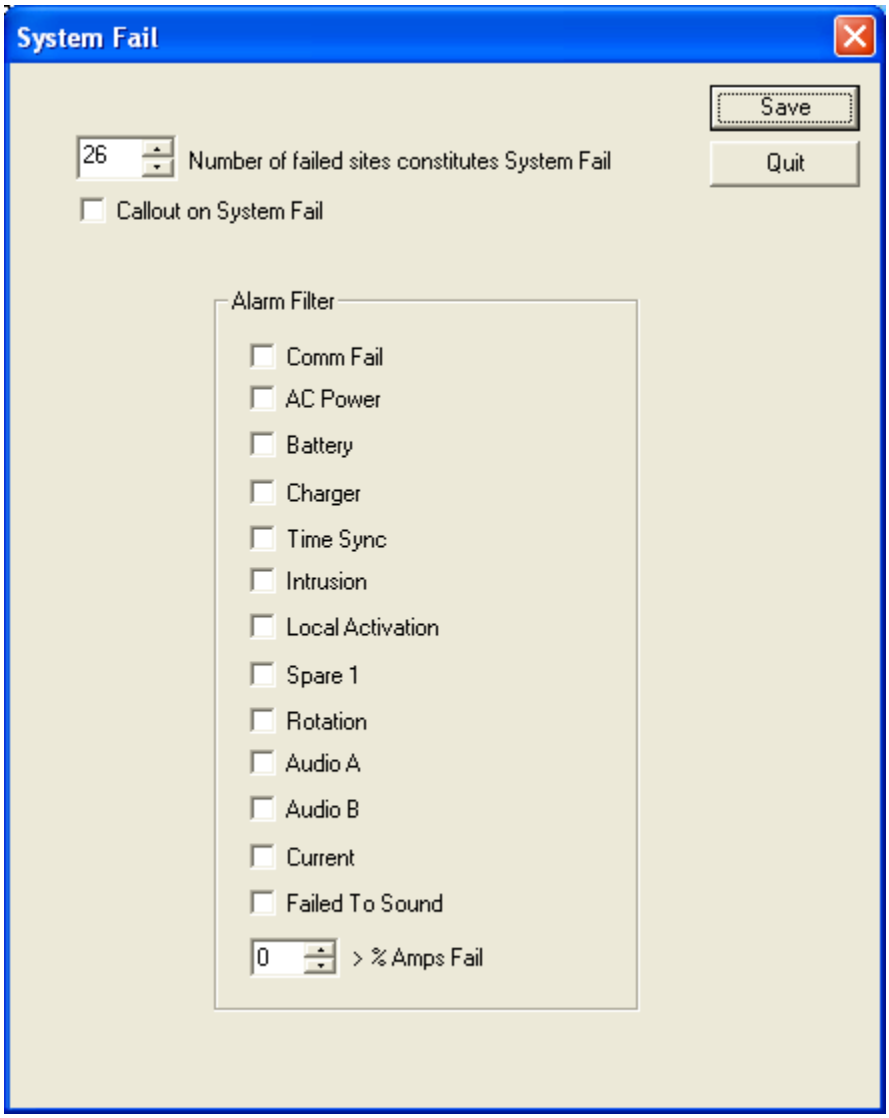
Individual System Fail is reported on the Status Detail screen for each site in the system. This status point is set to fail when the conditions setup on the Alarm Filter is met following reception of a poll response. An individual system fail does not cause an entry in the system log or start a callout or email process.

A general System Fail occurs when the number of individual sites with System Fail exceeds the number setup in the “Number of failed sites constitutes System Fail” parameter. At this time, a “System Fail” entry will be posted to the System Log and if enabled, callout and email will occur. Callout and Email use the same callout list and email parameters as other alarms (standard software).

The system checks for a general system fail once a minute by scanning individual sites. Once a general system fail occurs, all individual system fails are cleared. A general system failure will occur the next time the number of failed individual sites equals or exceeds the configured value. This will normally occur following the next system polling.

System fail setup dialog

Clicking on the System Fail button displays the System Fail setup dialog:



Number of failed sites constitutes System Fail

Set the number of failed sites constitutes System Fail value in the numeric text box. Use the up-down arrows or the number may be entered directly. When the number of individual sites with System Fail as defined using the Alarm Filter below exceeds or exceeds this value, a System Fail alarm will be reported.

Callout on System Fail

Set this checkbox to have SFCDWARE initiate a callout sequence when a System Fail alarm occurs.

Alarm Filter

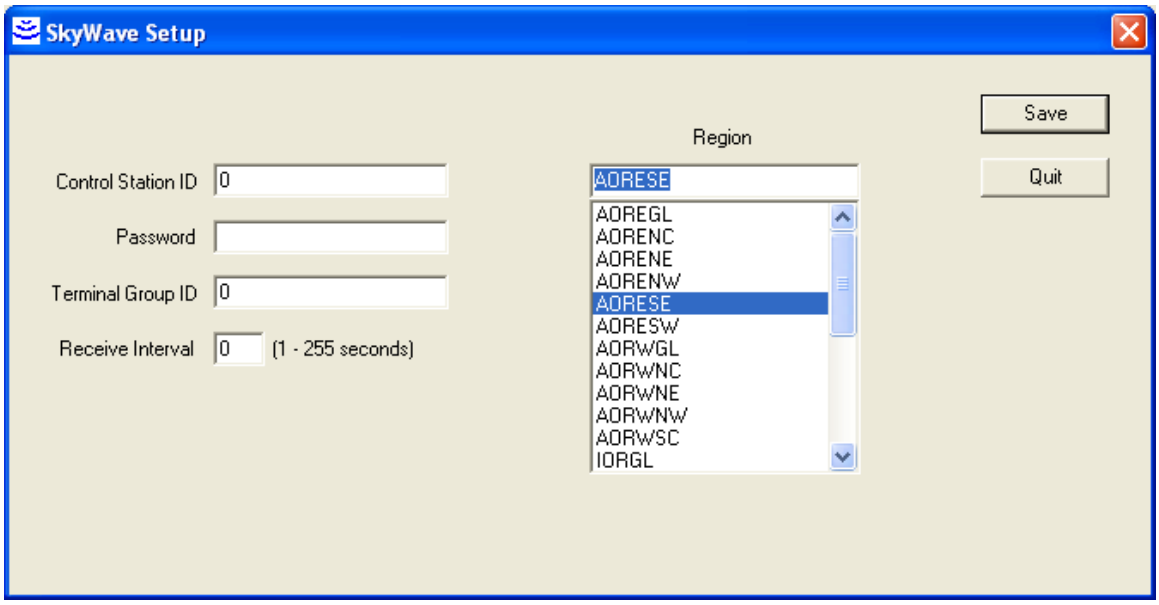
Use the Alarm Filter to define which alarms constitute system fail.

% Amps Fail

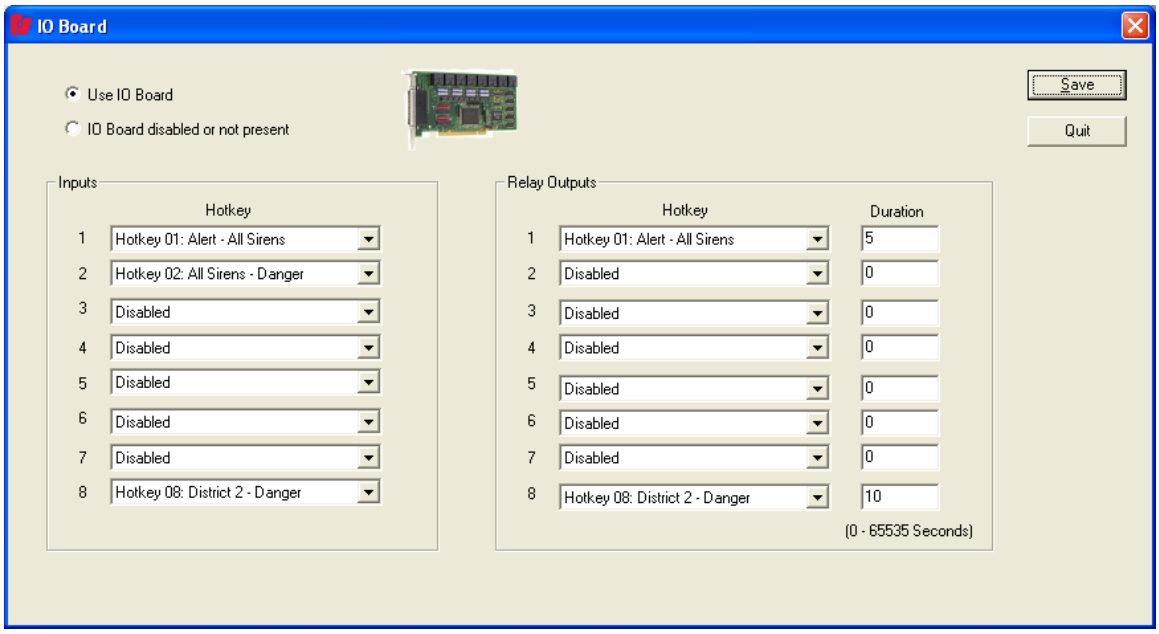
This field selects the percentage of amps which must fail to trigger a system fail for the site. *The percentage of amp fails that will trigger a system fail must be greater than the selected value. Example: On a two amplifier siren if it is desired to trigger a system fail when one amplifier has failed, set the "% Amps Fail" setting to 49% or less. A setting of 50% will trigger a system fail only if both amplifiers have failed.*

SkyWave

The SkyWave setup screen is used to configure parameters required to access the SkyWave satellite network. It is only necessary to configure these parameters if the communication mode is set for SkyWave. This should be only be performed by personal familiar with the Skywave system and has access to the required parameters.



IO Board



The IO Board setup screen allows digital inputs and relay outputs to be associated with hotkeys for interfacing to third party equipment. *Note: The IO Board requires additional steps to be taken during installation to be functional. It is important that IO Board functionality be tested after installation to verify correct operation.*

Use IO Board

Select this option only when the computer is equipped with an IO Board and the special installation steps have been performed.

IO Board disabled or not present

Select this option if it is desired to disable the IO Board or the Commander computer is not equipped with the IO Board option.

Inputs

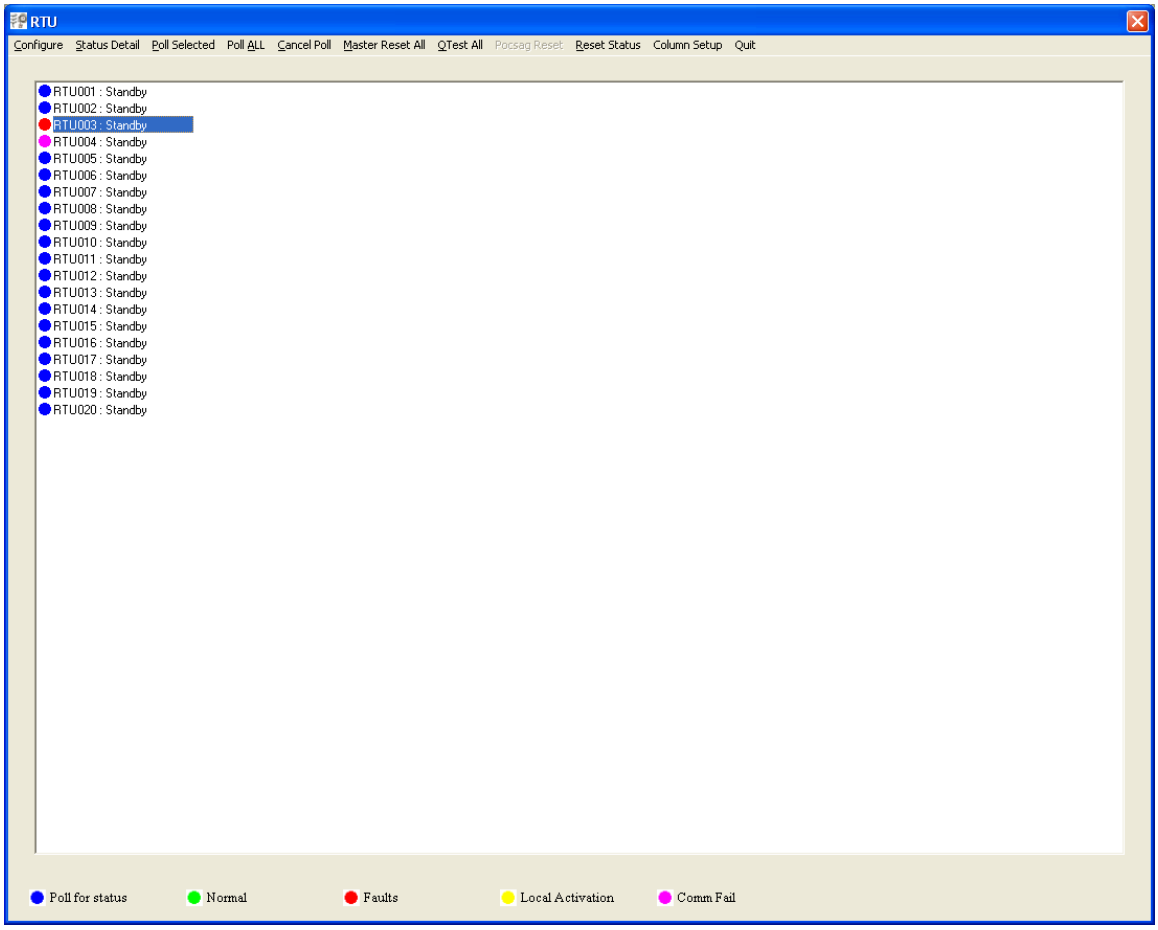
Each of the eight inputs may be associated with a hotkey or disabled. When associated with a hotkey an active input will cause the respective hotkey to activate as if the hotkey were clicked. An active input is defined as voltage detected on the input (5 – 28V) for a period of 500 ms.

Outputs

Similar to inputs relay outputs may be associated with a hotkey or disabled. When associated with a hotkey the relay will close for the duration specified (in seconds) when the respective hotkey is clicked. All relays will clear if another hotkey activation occurs that is not programmed to close the relay even if the duration has not yet expired.

RTU

After selecting RTU from the SFCDWARE System window, the following screen is displayed:



AVAILABLE MENU SELECTIONS

Configure

This radio button will start the Configure General Parameters of RTU window. See below for details.

Status Detail

This radio button will start the Status Detail for RTU window. See below for details.

Poll Selected

This radio button will manually poll the currently selected RTU. "Poll" is defined as the process of the CCU interrogating a remote RTU site for the purpose of updating it's database with the current conditions at the RTU site. The system operator must be aware that site conditions displayed on any of the CCU screens are not real time -- but the conditions at the time of the last Poll.

Poll ALL

This radio button will start a system wide polling operation.

Cancel Poll

This selection will terminate a Poll All sequence.

Master Reset All

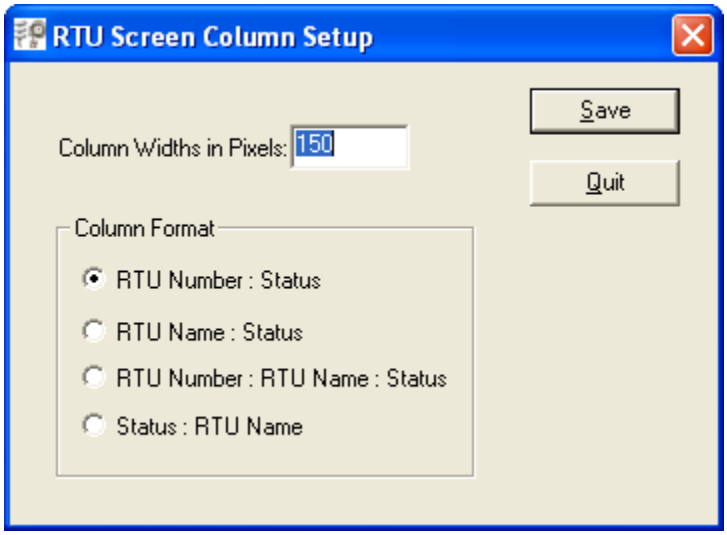
This selection will send out an All-Call Master Reset. All sirens will cancel any function currently running and all latched status conditions will be reset to their inactive state.

QTest All

This selection will send a Quiet Test to all sites

Column Setup

This selection displays a popup menu allowing the user to customize how the RTU screen is displayed:



Column Widths in Pixels

Sets the width of each column displayed on the RTU screen. Note: The number of RTUs which may be viewed at a given time decreases as the column width is increased.

Column Format

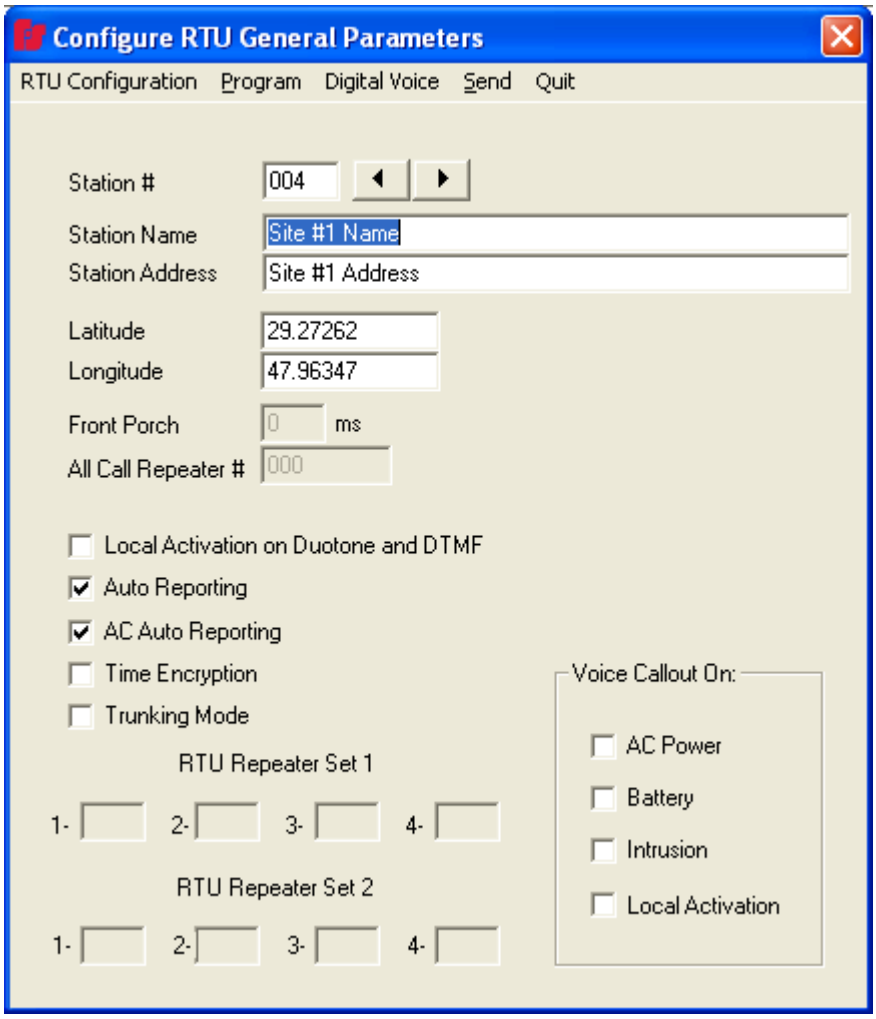
Column Format selects what will be displayed in each column of the RTU screen. The first option “RTU Number : Status” is the default and will display the RTU Number followed by site status. There are four possible options as shown above. Options which include the RTU Name may require a wider column width setting to allow enough room to display the name.

Quit

This radio button will cause the Status Summary of Listed RTU's window to terminate.

Configure RTU General Parameters

After selecting Configure from the Status Summary of Listed RTUs window, the following window is displayed.



AVAILABLE MENU SELECTIONS

Siren Configuration

This selection displays the Siren Configuration window for the selected RTU. This is used to set up certain programmable parameters at each RTU site. See below for details.

Program

This selection displays the Program window for the selected RTU. This is used to set up

activation functions for each RTU site. See below for details.

Digital Voice

Push digital voice messages to unit (Informer-IP type units only)

Send

This selection will cause the Send Message to RTU window to be displayed for the current RTU. See below for details.

Quit

This selection will cause the Configure General Parameters of RTU window to terminate.

CONFIGURE RTU GENERAL PARAMETERS FIELD DESCRIPTIONS.

The options on the General Parameters screen are sent to the RTU by sending the RTU General Parameters command. All other RTU parameters including the items on the 'RTU Configuration' and 'Program' screens are sent using the Program command.

Spin Control

The spin control (arrow buttons) selects the next or previous RTU.

Station #

This display only field contains the virtual RTU number of the RTU data currently being displayed.

Station Name

The format of this data entry field is any alphanumeric data from 0 to 30 characters long. To change the Station Name, highlight the current Station Name, then enter a new name.

This data field contains the RTU name. This is usually a local or familiar name of the location of the RTU.

Enter "NOT USED" for the station name to cause the respective RTU to be passed during automatic polling. This may be desired if the RTU has not yet been installed, or is down for service. *This feature is only applicable for sequential polling only. For non-sequential polling all sites are polled even if the station name is set to "NOT USED".*

Station Address

The format of this data entry field is any alphanumeric data from 0 to 30 characters long. To change Station Address, highlight the current Station Address, then enter a new address.

This data field usually contains the city street address of the RTU.

Latitude and Longitude

Longitude and Latitude is used with EMTools to specify the location of siren sites in decimal degrees. These fields are optional and may be left blank when Commander® is not being used with EMTools.

Front Porch

This field controls the transmitter front porch (carrier dead time before PTT). Normally, this should be set to 150ms (depending on radio key-up time) unless your system uses repeaters or trunking which will require a longer time.

All Call Repeater #

Specifies the All Call Repeater number of this RTU. Set to Zero if this RTU is not used as an All Call Repeater.

All Call Repeaters will digipeat all call and zone activation commands in sequence, starting with all call repeater number one and propagating through the system to the highest numbered all call repeater. Using all call repeaters allows reaching sites that are too distant to hear the base, without the need for expensive dedicated repeater systems. Any site in the system may be assigned an all call repeater number. When selecting all call repeaters, use the following guidelines:

1. Repeater number one must be able to hear the base. Select repeaters that are able to hear the base as lower numbered repeaters. It is advantageous if repeater two and three are also able to hear the base (see Limitations below).
2. Higher order repeaters must be able to hear at least one lower numbered repeater or the base. If possible, select repeater numbers such that adjacent repeater numbers are able to hear each other.
3. The front porch on all repeaters must be set to the same value.
4. Assign all call repeater numbers in sequential order, starting with number one. Do not skip numbers.

Limitations:

Higher numbered repeaters have a built in redundancy as they have an opportunity to hear all lower number repeaters that come before it, however if repeater number one fails to hear the base or is out of commission, the chain is broken and no repeater will transmit unless it is also able to hear the base directly. Therefore, for redundancy, make sure two or more of the lowest numbered repeaters are able to hear the base.

When using all call repeaters, it may be necessary to turn off All Call Retries (See Status Base screen) as the time required for the digipeats to take place may exceed the retry delay.

Local Activation of Duotone or DTMF (ENABLED / DISABLED)

When enabled RTU will auto report Local Activation when siren is activated by Duotone or DTMF and master current is detected. This option requires fcm v5.2 or uvh v7.2 or later and has no affect for earlier versions of RTU firmware.

Auto Reporting (ENABLED / DISABLED)

This checkbox field controls whether or not alarms will be auto reported from this RTU. If enabled this RTU will auto report alarms when they occur. If disabled alarms will not be auto reported however they will be sent when this RTU is polled.

AC Auto Reporting (ENABLED / DISABLED)

This checkbox field controls whether or not AC power fail will be auto reported from this RTU. If enabled this RTU will auto report power fail when it occurs. If disabled power fail will not be auto reported however they will be sent when this RTU is polled.

Time Encryption

The Time Encryption option, when enabled adds extra security against malicious operation. This is accomplished by comparing the base station's time and date encoded into the activation message with the rtu's (siren) time. If they differ by a predetermined amount, the siren will not sound and a sync fail error will occur. It is recommended that this option not be used unless malicious operation by recording activation signals is a problem. There is a potential the sirens may fail to operate when called upon if the time clocks drift out if sync.

Trunking Mode (ENABLED/ DISABLED)

This checkbox field controls trunking mode. Trunking mode is used only for selected trunking transceivers and should normally be disabled.

Repeater General Information

A repeater is a normal RTU that is used as a communication link between the CCU and a target RTU.

The best possible situation is that the CCU will be able to communicate directly with every RTU in the network. In this situation, no repeaters are needed to reach any RTU.

In real life there are usually RTUs that the CCU cannot communicate with directly because the distance is too great, or there is some object in between the CCU and RTU. In this situation, up to four repeaters can be used to reach any RTU.

If the CCU does not need to use repeaters to be able to communicate with an RTU, both RTU Repeater Set #1 and RTU Repeater Set #2 will contain blanks for all RTU numbers. If Repeater Set #1 is blank and Set #2 contains repeaters, the CCU will first attempt to communicate using the direct path and retry using Set #2 only if the direct path fails.

If the CCU does need to use repeaters to be able to communicate with an RTU, RTU Repeater Set #1 will contain one or more RTU numbers, and RTU Repeater Set #2 can optionally contain a different set of RTU numbers. If any repeaters are specified for RTU Repeater Set #1, they will always be used in any communication attempt with this RTU. If any repeaters are specified for RTU Repeater Set #2, they will only be used if the CCU is unable to communicate with this RTU using RTU Repeater Set #1.

The CCU will then wait the number of seconds indicated in the Retry Delay field of the System Setup window for a reply from the RTU. If no reply is received within the Retry Delay time, and if the # Tries field on the System Setup window is greater than 1, the CCU will try again to communicate with the RTU, using the same repeaters as before, if any. The CCU will attempt to communicate with this RTU with the same repeaters (if any) as many times as the # Tries field indicates.

The CCU will again wait the indicated number of seconds. If no reply is received again, the CCU will generate a Comm Fail alarm message for the Alarm Log, with the CCUs date and time of when the last failure occurred. Then if the CCU used any repeaters for the first attempt(s), and if there are any repeaters specified in RTU Repeater Set #2, the CCU will again attempt to communicate with the RTU using the repeaters from RTU Repeater Set #2. During an All Poll the

retry for Repeater Set #2 will occur at the end of the queue, after an attempt has been made to communicate with all sites using Repeater Set #1. The CCU will again wait the indicated number of seconds for a reply. If no reply is received again, and if the # Tries field on the Status of Base Unit window is greater than 1, the CCU will try again to communicate with the RTU, using the same repeaters from RTU Repeater Set #2. The CCU will attempt to communicate with this RTU with the repeaters from RTU Repeater Set #2 as many times as the # Tries fields indicates.

Note: To first try without repeaters (direct path) put the destination site address as the first repeater in Set #1. The CCU will attempt to communicate using Set #2 only if the direct path fails. To retry without repeaters (direct path) for Repeater Set #2, put the destination site address as the first repeater in Set #2. If Repeater Set #2 is blank, no retries, direct or otherwise, will occur.

If all attempts to communicate with the RTU fail, the CCU will generate a Comm Fail alarm message for the Alarm Log, with the CCUs date and time of when the last failure occurred.

RTU Repeater Set #1

The format of these four data entry fields is from 0 to 3 digits each. If any repeaters are used, the first repeater must be entered in the repeater box labeled 1-, with the second repeater in the box labeled 2-, etc. If any repeaters are used, the RTU numbers must be entered as 3 digits each, with leading zeros required. If a repeater is to be removed from use, replace the RTU number with 3 blanks. To change any one of the repeaters, highlight the current repeater, then enter a new 3 digit RTU number or 3 blanks.

These data entry fields control which RTUs are used as a first set of repeaters to reach this RTU. Each of the four fields can contain one RTU number. RTU numbers must be entered in exactly the same order as they will be physically used; entry 1 would contain the RTU number of the first RTU in the link, while entry 2 would contain the RTU number of the next RTU in the link, etc.

If it is desired to first try the direct path and retry using repeaters only if the direct path fails, put the destination site address as the first repeater in Repeater Set #1.

RTU Repeater Set #2

These data entry fields control which RTUs are used as a second set of repeaters to reach this RTU if all communication attempts using Repeater Set #1 fail.

The format of these data entry fields is the same as for RTU Repeater Set #1.

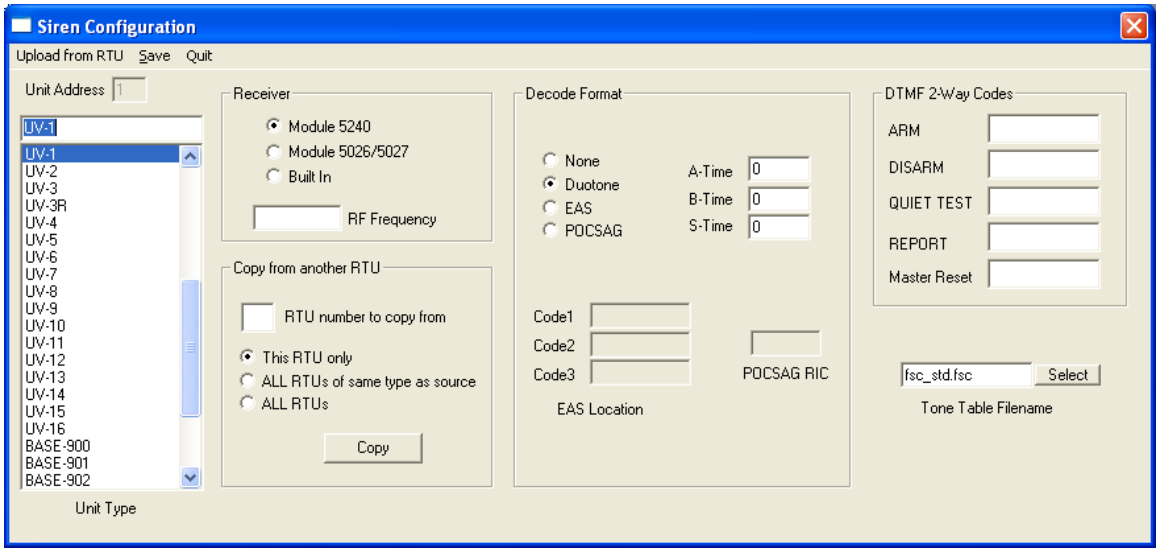
If Repeater Set #2 is blank, no retries will occur if Repeater Set #1 fails; however, if it is desired to retry a direct path if Repeater Set #1 fails, put the destination site address as the first repeater in Repeater Site #2.

Voice Call-out On

The checkboxes contained in this group enable or disable telephone Call-out for each of the respective monitoring points indicated.

Siren Configuration

The Siren Configuration window is used to set up certain programmable parameters at the selected RTU site. When this selection is made, the following window will be displayed.



From this screen the following selections are available:

Note: Some parameters on the Siren Configuration screen may not be applicable for your system.

Unit Type

Select the type of siren by highlighting the siren type in the "Unit Type" list box with the pointing device. The unit type selection must correspond to the type of siren controller installed at the selected RTU site number.

Base Types:

Base types (BASE-900 to BASE-909) allow the polling of remote base stations or activation points. To configure a site as a base type, select the base type that corresponds to the remote base unit address (900 number).

Unit Address

This display only field contains the virtual RTU site number this configuration information applies to. If this is not correct, exit the Configuration window and select the desired RTU number using the Previous and Next radio buttons.

Receiver (optional)

This selection is applicable only when a Federal Signal receiver module or built in receiver is installed. Select the model of receiver installed by clicking on its respective radio button.

To change the RF Frequency, highlight the current RF Frequency and enter a new number. The valid rages are: 30.0000 - 50.0000, 148.0000 - 172.0000, 450.0000 - 470.0000. Note: The RF Frequency field is only applicable on RTU sites that have a built in RF receiver.

Decode Format

All units decode FSK (digital) and DTMF signaling, however Duotone, EAS/SAME and POCSAG decoding is mutually exclusive. Select the desired decode format by clicking on the "Duotone" or "EAS" radio button. Select "None" if Duotone and EAS signaling are not used.

Duotone Timing (optional)

These three text boxes set up the duotone timing parameters. To change a value, highlight the current value and enter a new value. *If Duotone is not selected Decode Format, this field will be disabled (grayed out).*

EAS Location (optional)

For units using EAS/SAME decoding, allows the entry of one to three PSSCCC location codes. For EAS activation, the following two conditions must be valid:

1. The location code of the transmitted EAS message matches one of the three programmed location codes.
2. The EVENT code of the transmitted EAS message matches an event code assigned to an activation function (See Program RTU).

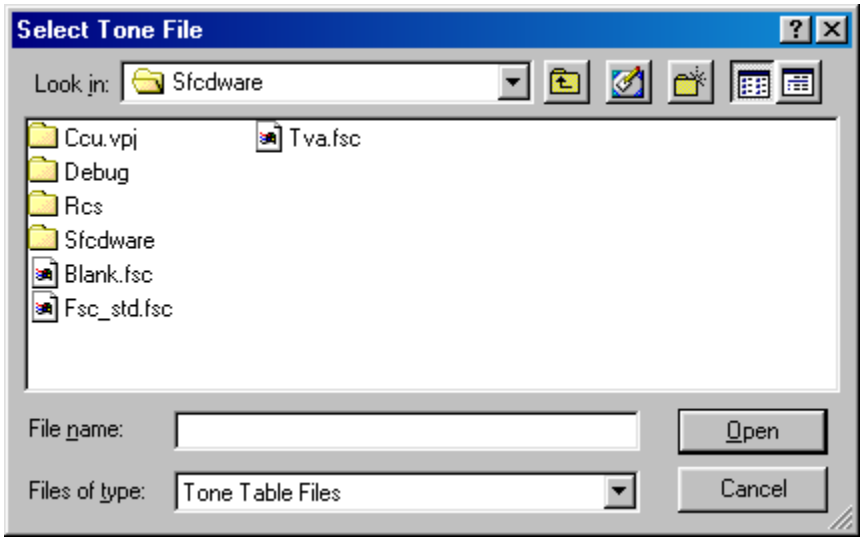
Note: EAS and Duotone activation is mutually exclusive. For EAS activation to be functional, EAS must be selected as the Decode Format.

RIC (optional)

For units using POCSAG decoding, specifies the POCSAG RIC (Receiver Identity Code).

Tone Table Filename

This selection specifies the name of the tone data file to be sent to the RTU. Tone data files are used to specify what electronic siren tones sound like. To change the entry, click on **Select.** The following browse dialog will pop up:



Select the desired filename using point and click. Click on **Open** to finalize your selection. Note: Tone files must be located in the current SFCDWARE working directory. An error message will occur if an attempt is made to select a file outside the current SFCDWARE working directory.

DTMF 2-Way Codes

This section is applicable for FCM DTMF 2-Way units only. DTMF strings must be from three to twelve characters in length and consists of the 16 standard DTMF characters (0-9, A-D, #, *).

Upload from RTU

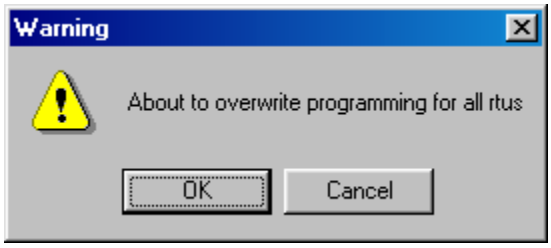
Sends a request for the RTU to upload configuration data. When this data is received, the Config dialog will update to reflect the current configuration of the RTU. Click Save if it is desired to update the system database with this new information. Clicking Exit will close the Config dialog without updating the system database.

Copy from RTU

This selection shortens the time required for initial configuration by allowing the programming from a source RTU to be copied into other RTUs. All parameters are copied with the exception of site name and address. There are three modes of operation:

1. This RTU only. Only current selected RTU will be overwritten.
2. All RTUs of same type as source. All RTUs of the same unit type as source will be overwritten.
3. All RTUs. All RTUs will be overwritten.

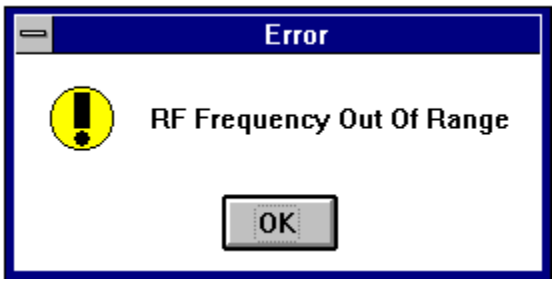
To commence copy operation, select the desired source RTU and mode of operation and click on the **Copy** button. The following warning message will pop up:



Click **OK** to continue copy process or **Cancel** to abort. Allows the programming

Save

Click the "Save" radio button to save the current settings and exit this screen. If there are any errors in your data, an error message box will appear: *Note: It is necessary to send the Program block command to the RTU before changes will take effect at the respective RTU.*



Correct the problem and Save again.

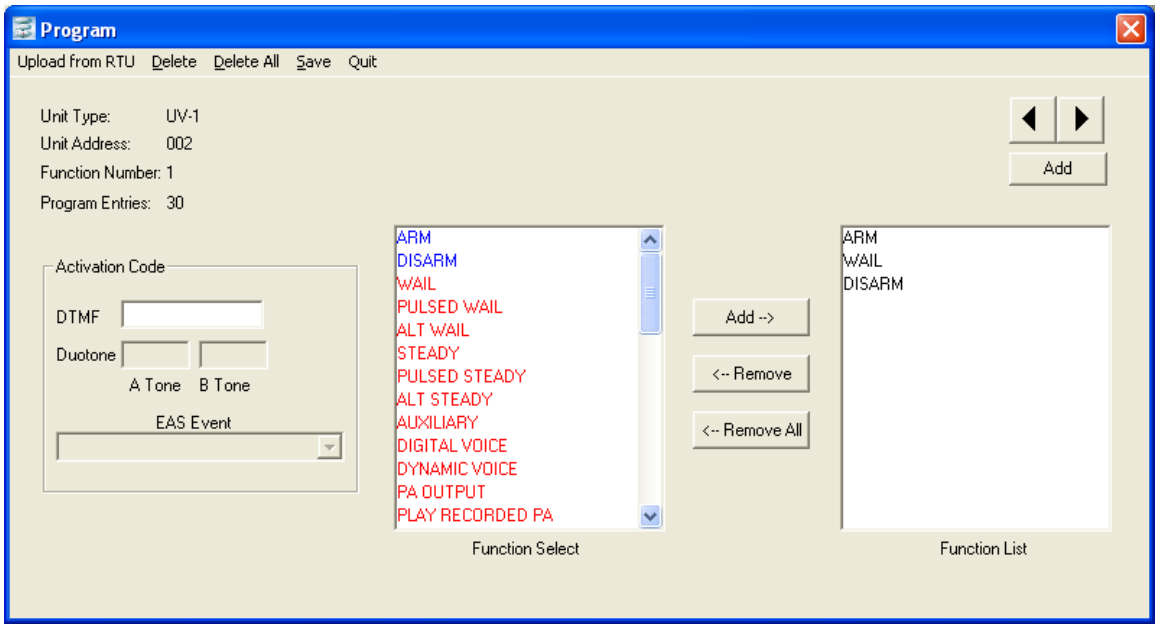
Exit

Click the Exit radio button to quit the RTU Configuration screen without saving. Configuration parameters will remain as they were when the Configuration screen was opened.

Program

The Program window is used to set up activation codes at the selected RTU site. Depending on the *Unit Type* selection, there are two possible windows that may be displayed when this selection is made.

For MCP and UltraVoice type sirens



Unit Type

Contains the current unit type from the configuration screen.

Unit Address

Contains the current unit address from the configuration screen.

Program Number

The current program entry number that is being displayed.

Program Entries

The number of program entries that are currently stored in memory. This number will be zero if no program entries are currently stored in memory.

DTMF (optional)

If this is a DTMF type code, enter the DTMF digits for this function here. Acceptable DTMF digits are: 0-9, A, B, C, D, *, #. Note: The *DTMF* selection is only applicable on systems that use DTMF signaling.

Duotone (optional)

If this is a tone type code, enter the A Tone and B Tone frequencies for this function here. The acceptable frequency range is 280-3000 Hz. Note: The *duotone* selection is only applicable on systems that use duotone signaling.

EAS Event (optional)

For units using EAS/SAME decoding, allows an EAS Event (EEE) code to be associated with this activation function. For EAS activation, the following two conditions must be valid:

1. The location code of the transmitted EAS message matches one of the three programmed location codes (see Config RTU).
2. The EVENT code of the transmitted EAS message matches an event code assigned to an activation code.

Note: EAS and Duotone activation is mutually exclusive. For EAS activation to be functional, the Duotone Timing parameters (A-Time, B-Time, S-Time) must be set to zero.

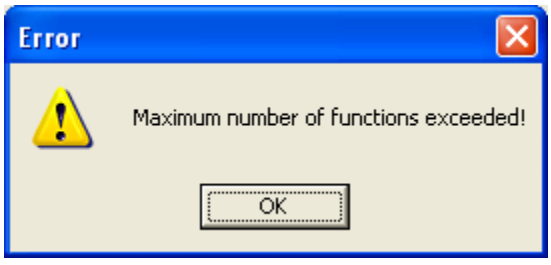
Function

Two list boxes handle setting up the function sequence. The Function Select box contains a list of available functions. To add a function highlight the desired function and click the **Add->>** button. The new function will be inserted after the selected (highlighted) item in the Function box. Functions will be executed in sequence and in the order they appear in the list. To remove a function highlight the desired function and click the **Remove** button. Click **Remove All** to remove all functions.

Arm and Function timers

All sounding functions and relays outputs will automatically turn off when the RTU becomes disarmed. Upon reception of the ARM function the RTU will remain armed for 255 seconds. The disarm timer is halted during sounding functions and resumes during the DELAY function or at the end of the function sequence. It is good practice to start each function sequence with an ARM and end with a DISARM.

Each individual function is limited to 255 seconds duration.



The following functions consume two slots:

- DELAY
- REPEAT START
- POWER
- DIGITAL VOICE-n (only if n > 16)

The following function consumes three slots:

- AMP/AUDIO ZONE

All other functions consume one of the 20 available slots.

Available Functions

Utility Functions:

ARM

Arms the siren. The siren must be armed or activation functions will not operate. Once armed, the siren will remain armed for approximately 4 ½ minutes. The ARM function will also perform the following:

1. Set Phasing to off (PHASE OFF).
2. Set power output to maximum (HIGH POWER MODE)
3. Set amp zoning to all amps enabled.

DISARM

Disarms the siren

REPORT

Send unit status to base.

MASTER RESET

Terminates active function and clears latched status.

PLUS PHASE

All functions between “PLUS PHASE” and “MINUS PHASE” will repeat for the duration of time encoded in the EAS activation frame (EAS activations only).

MINUS PHASE

All functions between “PLUS PHASE” and “MINUS PHASE” will repeat for the duration of time encoded in the EAS activation frame (EAS activations only).

PHASE OFF

Turn off minus and plus phase and return siren to omni directional mode.

LOW POWER MODE

Reduce unit power to approximately one watt.

HI POWER MODE

Return unit to full power.

QUIET TEST

Performs a self-test of the siren control unit, amplifiers and speakers by sounding a 20KHZ tone.

DELAY

Delay or pause for a fixed number of seconds.

AMP/AUDIO ZONE

Allows amplifiers and audio outputs (audio relay board) to be selectively disabled for zoning purposes.

POWER

Allows the siren output power to be reduced by a selectable amount.

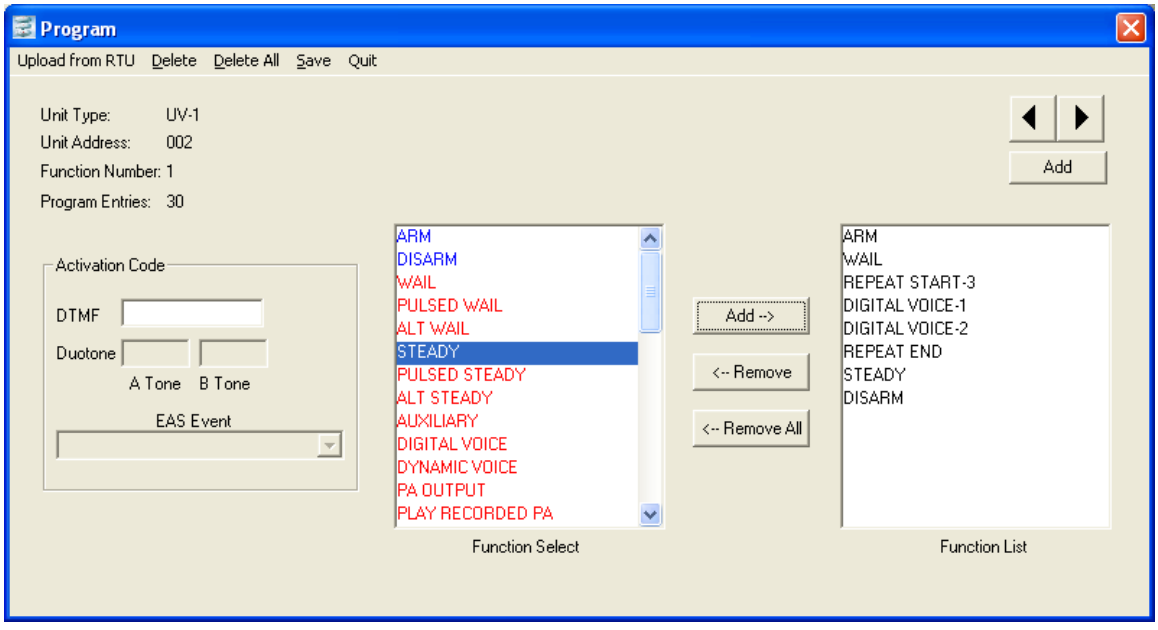
RECORD PA

Records live PA message for later playback utilizing the “PLAY RECORDED PA” function. Recording is terminated by reception of the EAS-SAME End of Message command or two minutes, whichever occurs first.

REPEAT START
REPEAT END

Repeat Start and Repeat End are used to frame a sequence of functions for repeating.

Example: The following program will repeat the DIGITAL VOICE-1 and DITIAL VOICE-2 sequence three times.



Activation Functions:

PA OUTPUT

Broadcast live radio PA. PA will remain active until carrier has dropped for ten seconds or 4 1/2 minutes, whichever occurs first.

WAIL

Sound Wail siren tone.

PULSED WAIL

Sound Pulsed Wail siren tone.

ALT WAIL

Sound Alternate Wail siren tone.

STEADY

Sound Steady siren tone.

PULSED STEADY

Sound Pulsed Steady siren tone.

ALT STEADY

Sound Alternate Steady siren tone.

AUXILIARY

Sound Auxiliary siren tone. The Auxiliary tone is normally set for Westminster Chimes.

DIGITAL VOICE -n

Play Digital Voice number n. Range:

- 1 – 16 (for Legacy RTUs)
- 1 – 250 (for RTUs running uvh v7.2 or greater)

Warning: Do not attempt to play digital voice number greater than 16 on legacy RTUs.

PLAY RECORDED PA

Play message previously recorded during the “RECORD PA” function. For EAS activation, the message will repeat continuously for the duration of time encoded in the TTTT field. For non-EAS activation, the “PLAY RECORDED PA” function will play once without repeats.

DYNAMIC VOICE

Plays a sequence of digital voice messages specified at the time of activation. This function is only applicable for sirens equipped with a special vocabulary chip.

CANCEL

Terminates active function.

Rotation Functions:

ZONE A

Position siren head in the A direction.

ZONE B

Position siren head in the B direction.

ZONE C

Position siren head in the C direction.

ZONE D

Position siren head in the D direction.

Relay Functions:

Note: All relays automatically turn off when unit becomes disarmed

RELAY #1 ON

Turn relay #1 On (Relay/Audio expansion board).

RELAY #1 OFF

Turn relay #1 Off (Relay/Audio expansion board).

RELAY #2 ON

Turn relay #2 On (Relay/Audio expansion board).

RELAY #2 OFF

Turn relay #2 Off (Relay/Audio expansion board).

RELAY #3 ON

Turn relay #3 On (Relay/Audio expansion board).

RELAY #3 OFF

Turn relay #3 Off (Relay/Audio expansion board).

RELAY #4 ON

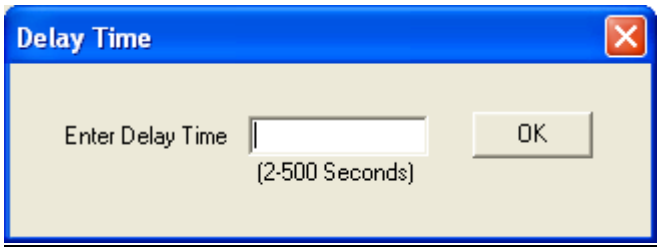
Turn relay #4 On (Relay/Audio expansion board).

RELAY #4 OFF

Turn relay #4 Off (Relay/Audio expansion board).

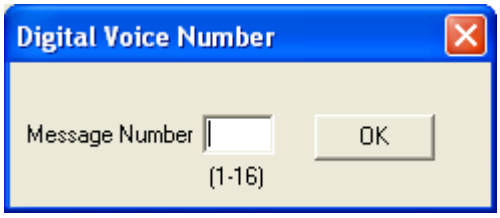
The following functions require additional information:

Delay:



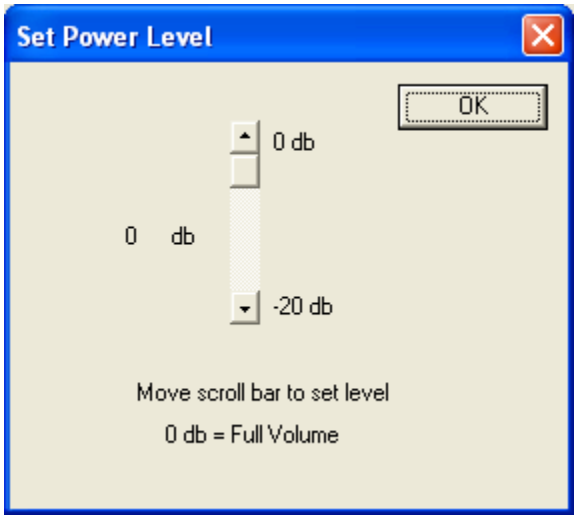
Enter the desired delay time and click on OK.

Digital Voice:



Enter the desired digital voice number to run and click on OK. If voice number is not between one and sixteen, an error message box will appear.

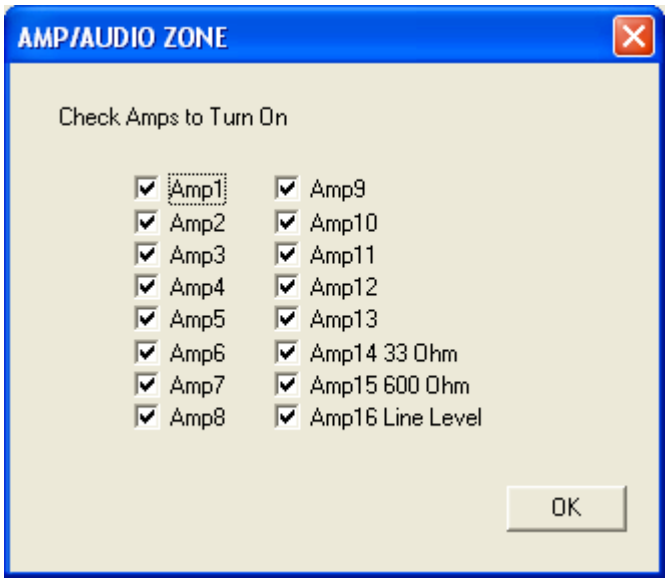
Power:



The power function allows the siren output volume to be reduced up to 20db. Each 3db reduction results in half the power output. Power level defaults to 0 db (full power)

following execution of the ARM function.

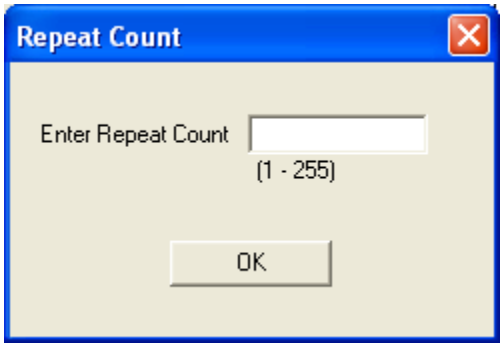
AMP Zone Control (AZ):



Click on the check box to disable or enable the desired amp. A check indicates that this amp will be enabled. Note: All amplifiers default to enabled following execution of the ARM function.

For zoning purposes the audio outputs of the auxiliary audio/relay board are combined with Amp14-Amp16.

REPEAT START –n



Enter the desired number of times to repeat and click on OK. All functions between REPEAT START and REPEAT END will repeat n times.

The repeat function requires RTU uvh v7.2 or greater. *Warning: Do not attempt to use the repeat functions on legacy RTUs!*

REPEAT END

Repeat all functions between REPEAT START and REPEAT END n times.

The repeat function requires RTU uvh v7.2 or greater. *Warning: Do not attempt to use the repeat functions on legacy RTUs!*

Add button and spin control

The Spin Control (arrow buttons) selects the next or previous program entry. Add adds a new program entry.

*Note: Changes made to the programming are saved by clicking on the **Save** menu item. If the dialog is closed without saving, changes will not be saved.*

Upload from RTU

Clicking on this radio button will cause SFCDWARE to transmit a request for the RTU to upload it's programming information. When this information is received, the information displayed in the Program dialog will reflect that of the RTU. This is a useful tool for verifying the programming at the RTU is correct. Click on Save if it is desired to update the SFCDWARE database. Clicking on Exit will close the dialog without updating database.

Delete

This selection will delete the currently displayed program.

Delete All

This selection will delete all programs currently in the database. A warning message will appear. Click OK to continue and delete all programs or Cancel to abort the deletion process.

Save

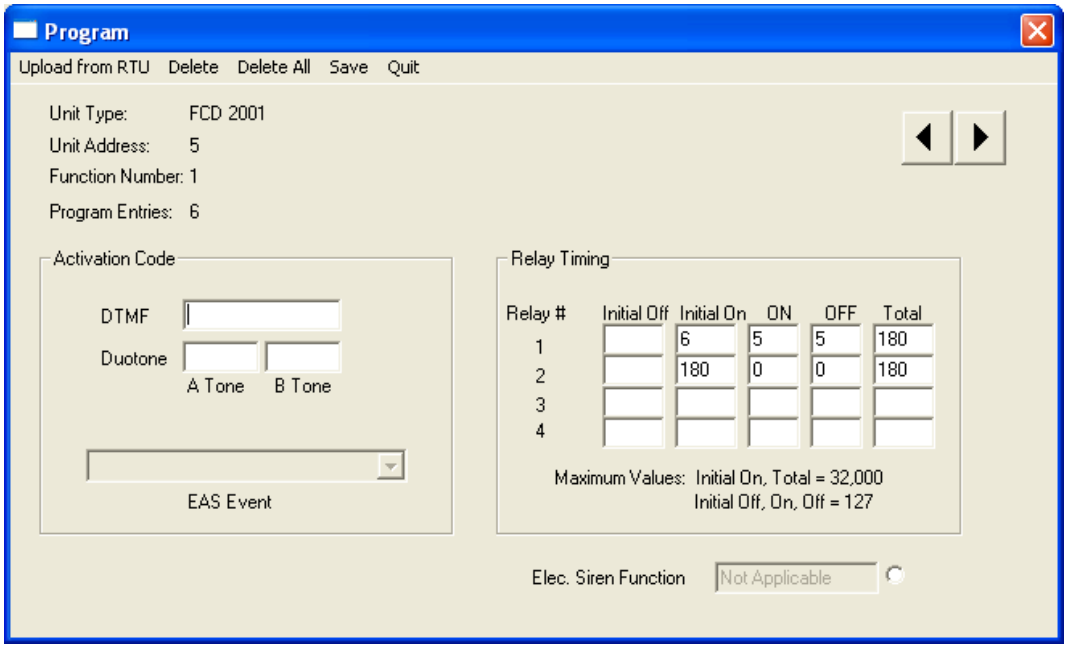
This selection will close the Program dialog and save the programs currently displayed. Note: It is necessary to send the Program block command to the RTU before changes will take effect at the respective RTU.

Exit

This selection will close the Program dialog box without updating database. A warning box will appear. Click continue to terminate the program dialog (all edits will be lost). Click Cancel to abort the exit process.

*Note: Changes made to the programming are saved by clicking on the **Save** menu item. If the dialog is closed without saving, changes will not be saved.*

For FC type RTUs:



Unit Type

Contains the current unit type from the configuration screen.

Unit Address

Contains the current unit address from the configuration screen.

Program Number

The current program number displayed.

Program Entries

The number of program entries that are currently stored in memory. This number will always be six for FCD type sirens.

DTMF (optional)

If this code is to be activated by DTMF, enter the DTMF digits here. Acceptable DTMF digits are: 0-9, A, B, C, D, *, #. For wildcard digits, precede the digit with an apostrophe (a wild card digit is valid for pound sign as well as the specified digit). Note: The *DTMF* selection is only applicable on systems that use DTMF signaling. If DTMF signaling is not used, this field should be left blank.

Duotone (optional)

If this is a tone type code, enter the A Tone and B Tone frequencies for this function here. The acceptable frequency range is 300-3000 Hz. Note: The *duotone* selection is only applicable on systems that use duotone signaling. If duotone signaling is not used, this field should be left blank.

EAS Event (optional)

For units using EAS/SAME decoding, allows an EAS Event (EEE) code to be associated with this activation function. For EAS activation, the following two conditions must be valid:

1. The location code of the transmitted EAS message matches one of the three programmed location codes (see Config RTU).
2. The EVENT code of the transmitted EAS message matches an event code assigned to an activation code.

Note: EAS and Duotone activation is mutually exclusive. For EAS activation to be functional, the Duotone Timing parameters (A-Time, B-Time, S-Time) must be set to zero.

Relay Timing

This field specifies the relay timing cycle for each of the four motor control relays on the FC RTU. To change the value, highlight the desired selection and enter a new value. Acceptable values are:

0-32767 seconds for Initial On and Total times.
0-127 for On, Off and Initial Off times.

Upon activation, relays will remain Off for the duration of the Initial Off time, and then turn On for the duration of the Initial On time. Upon expiration of the Initial On time, the relays will cycle between On and Off for the duration of Total Time. For a steady function, set the Initial On and Total time to the desired duration and all other fields to zero.

Initial Off is used to delay the activation of the relay cycle. This is useful when it is desired to have individual relays operate at a different time or setting up a phase relationship.

Electronic Siren Function

This selection specifies which electronic siren tone is to be generated by the FCD RTU. To change the selection, click on the radio button until the desired function name appears in the text box. Note: This selection is only applicable on FCD controllers with electronic siren capabilities. Electronic tone data specification files are selected on the Configure RTU window. This file specifies what each electronic siren function sounds like. *If "Not Applicable" is displayed, this RTU is not capable of generating electronic siren functions*.

Spin Control

The Spin Control (arrow buttons) selects the next or previous program entry.

Upload from RTU

Clicking on this radio button will cause SFCDWARE to transmit a request for the RTU to upload its programming information to the base. When this data packet is received, the information displayed will reflect that of the RTU's current programming. This is a useful tool for verifying the programming at the RTU is correct. Click on Save if it is desired to update the SFCDWARE database with the new information. Clicking on Exit will close the dialog without updating the database.

Delete

This selection will delete the currently displayed program.

Delete All

This selection will delete all programs currently in the database. A warning message will appear. Click OK to continue and delete all programs or Cancel to abort the deletion process.

Save

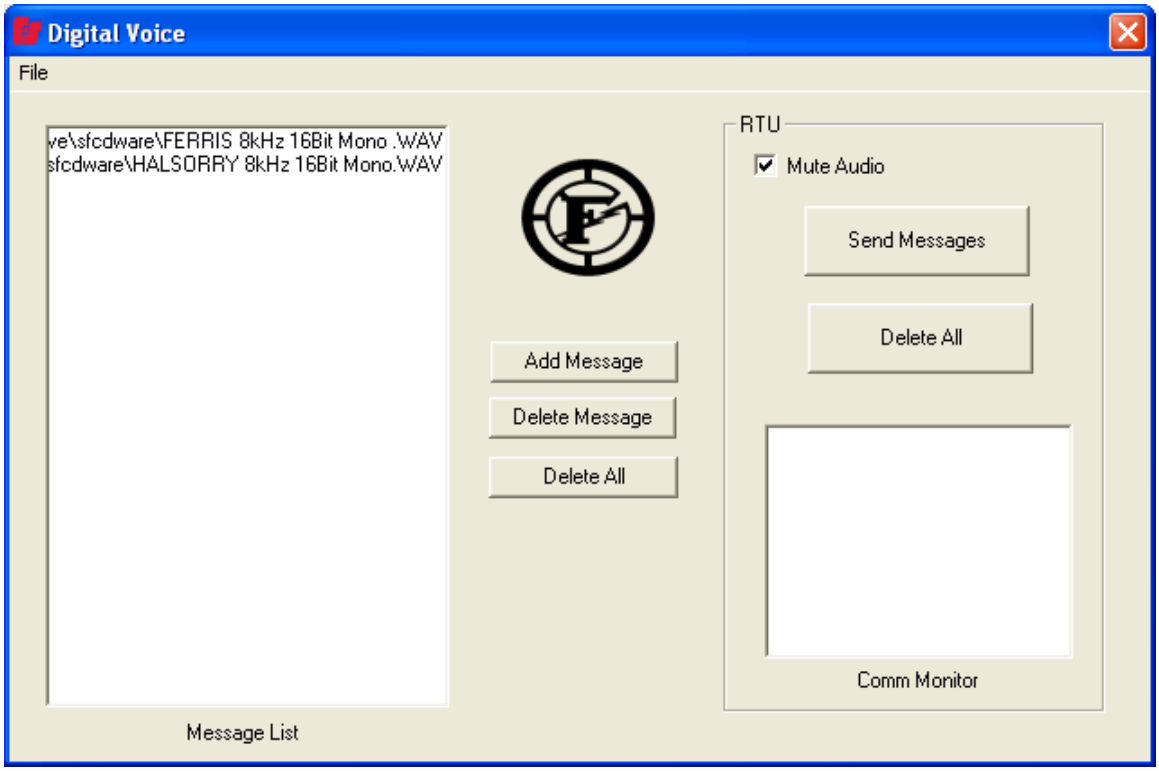
This selection will close the Program dialog and save the programs currently displayed. *Note: It is necessary to send the Program block command to the RTU before changes will take effect at the respective RTU.*

Exit

This selection will close the Program dialog box without updating database. A warning box will appear. Click continue to terminate the program dialog (all edits will be lost). Click Cancel to abort the exit process.

Digital Voice

The Digital Voice option is available for Informer-IP type units only. This configuration option is used to push digital voice messages to the Informer-IP:



Use the three buttons in the center of the dialog to add or remove messages from the Message List:

Add Messages:

Add new message to end of list

Delete Message:

Delete highlighted message from list

Delete All

Delete all messages from list

RTU button selections

Controls within the RTU frame are used for sending messages to the RTU or deleting all messages currently in the RTU.

Send Message

Click the Send Messages button to send all messages in the Message List to the Informer-IP. Messages are sent real time one at a time in the order they appear in the Message List. Messages are assigned a Message Number based on the number of messages currently programmed in the RTU. If there are currently 3 messages, the next message will be assigned number 4 as shown above. The assigned message number will appear in the Comm Monitor following completion of the upload. To remove all messages click the Delete All button. After performing Delete All the next message will be assigned number one. Delete All may take a few seconds, wait for acknowledgement before sending new messages.

Important: If you are unsure of the number of messages currently programmed, it is recommended to" Delete All" before adding new messages.

Delete All

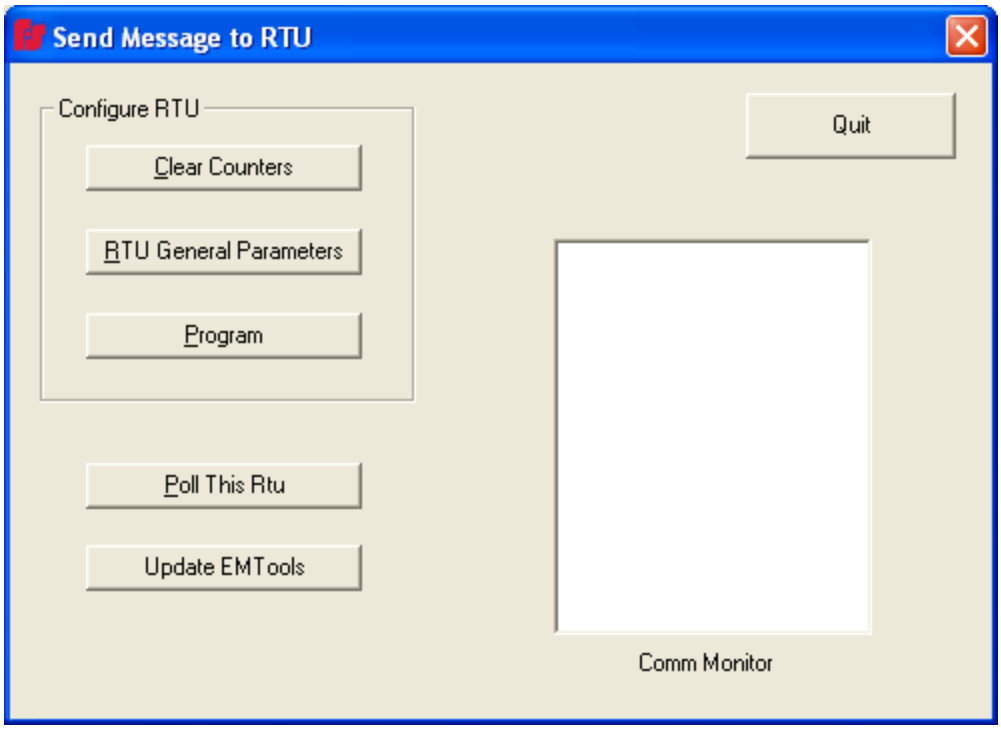
Deletes all messages programmed into the RTU. The next message sent will be assigned message number one.

Mute Audio

When enabled messages will not be audible at the RTU during transmission. When disabled the message will playback through the RTU speaker during transmission. *Warning: Mute Audio is enabled by default. Use extreme caution when sending messages with the mute audio option disabled as this could be mistaken for an actual emergency!*

Send Menu

After selecting SEND from the Configure RTU General Parameters window, the following window is displayed. The Config and Program screens must be closed before the Send Message to RTU window will appear.



Each selection in this window will cause the CCU to initiate one or more messages to the currently selected RTU. In each case, the CCU will wait for an acknowledgment from the RTU, for the number of seconds programmed for Retry Delay on the Status of Base Unit window. If the RTU does not respond within the Retry Delay time period, and if the retries field on the Status of Base Unit window is greater than one, the CCU will resend the message again to the same RTU. The CCU will continue to attempt to send the requested message until either the RTU acknowledges the message or until the maximum number of retries has been reached.

Clear Counters

This selection clears the activation and cancel counters for this RTU.

RTU General Parameters

This selection sends the following items from the RTU General Parameters screen:

- Alarms - Enabled/Disabled.
- Power Fail Detect - Enabled/Disabled.
- Trunking Mode - Enabled/Disabled.
- Front Porch - Dead carrier time before data transmission.
- SFCDWARE revision information.

Program

This selection sends the RTU it's personality data including the following information:

- Configuration data from the Configure RTU window of Configure RTU Parameters.
- Program data from the Program RTU window of Configure RTU Parameters.
- Zone configuration information from the Zone window of Base Status.
- Electronic siren tone data table.

Poll This RTU

This selection will send a poll message to the currently selected RTU. The CCU will then wait for the RTU poll data reply.

Update EMTools

This selection is only applicable when SFCDWARE is used in conjunction with EMTools. Clicking this selection will send siren location information to EMTools for all configured RTUs.

Quit

This selection will terminate the Send Message to RTU window, without sending any message.

Status Detail for RTU

After selecting Status Detail from the Status Summary of Listed RTUs window, the status detail screen for the respective siren type will be displayed.

FCT Type Status Detail

AVAILABLE MENU SELECTIONS

Poll

This selection will cause the CCU to initiate a poll request for the selected RTU. The CCU will then wait for the RTU to reply with the requested poll data.

Notepad

This selection serves as a scratchpad allowing operators to log site specific information to a text file. This feature utilizes Windows Notepad™ and is for the convience of users. It serves no other purpose in the operation of SFCDWARE.

Quit

This selection will cause the Status Detail of RTU window to terminate.

Spin Control

The Spin Control (arrow buttons) selects the next or previous program entry.

STATUS DETAIL OF RTU FIELD DESCRIPTIONS

RTU #

This field contains the RTU number of the currently selected RTU

Status

This field contains the most current status setting of the current RTU. This status reflects the RTU status as of the last time the RTU and CCU communicated with each other.

Address

This field contains the street address information for the selected RTU.

Unit Type

This field contains the type of RTU located at this RTU site.

Last Comm

This heading has two data fields: Date and Time of last communication. The two fields will contain the CCU date and time stamp of the last time any communications were completed with the current RTU.

The Last Comm Time field will show in Green if the last communication was successful or Red if a Comm Fail occurred.

RTU Version

Displays the RTU software version number (will show 0.0.0.0 if the RTU does not support this feature).

Site Conditions

This field contains the site conditions (status) of this RTU. The following data is available:

AC Power	
Battery	
Rotation	Latched
Current	Latched
Intrusion	
Pressure	Latched

Time Sync
Local Activation
Failed To Sound
System Fail

For data items marked Latched, once detected will remain latched (pass state) in the RTU's memory until a Master Reset, Quiet Test or Activation command is sent. This will allow the units to be polled at a later time following an activation to obtain activation status. It is very important for the operator to understand that all status data conditions are current as of the last poll and may not represent the present status conditions.

Failed To Sound

The “Failed to Sound” status point fails when one of the following conditions occurs:

1. Last Function Base and Last Function RTU do not agree
2. Last Function Base and Last Function RTU times disagree by more than 90 minutes
3. More than 50% of amplifiers FAIL
4. Rotation Fail (rotating type units only)
5. Pressure Fail (3-Motor type units only)
6. Chopper Fail

“Failed to Sound” reporting may be enabled or disabled by the setting of the “Failed to Sound” field on the System Setup screen. If enabled a Failed to Sound fault may occur when the site is activated locally or non-digital activation (duotone, DTMF, etc). Failed to Sound may also occur if unit is activated by a remote digital station and Commander is unable to eavesdrop the remote station.

System Fail

The “System Fail” status point fails when the conditions defined on the System Fail setup dialog Alarm Filter is met for this siren site. Note: An individual site System Fail alarm does not imply a general System Fail alarm. A general System Fail alarm may require multiple site failures as defined on the System Fail setup dialog.

Alarm (Automatic) Reporting

Indicates if RTU auto reporting is enabled or disabled. If enabled, auto reporting occurs when any of the above status conditions changes state. If disabled, status is sent only when polled.

Power Fail Reporting

Indicates if RTU power fail reporting is enabled or disabled. If enabled, power fail reporting occurs when AC Power changes state. If disabled, status is sent only when polled.

Function And Cancel Counters

Contains the number of activation and cancel codes received by this RTU. These fields are cleared (set to zero) by the Clear Counters command from the send menu of Configure RTU Parameters.

Activate Site

These eight push buttons send an activation command to the selected RTU.

Function Running

Displays the function running at the time of the last poll. If no function is running, STANDBY is displayed.

Last Function RTU

Displays the last function sounded by this RTU. The status of latched sensors (current, rotation, pressure, failed to sound) reflects the conditions of the siren as a result of the Last Function. If not function has sounded since a Master Reset, Standby will be displayed.

Last Function Base

Displays the last function activated by the base.

Note: If the Last Function base is not 'Standby', a Failed to Sound alarm will be asserted if one of the following conditions is met:

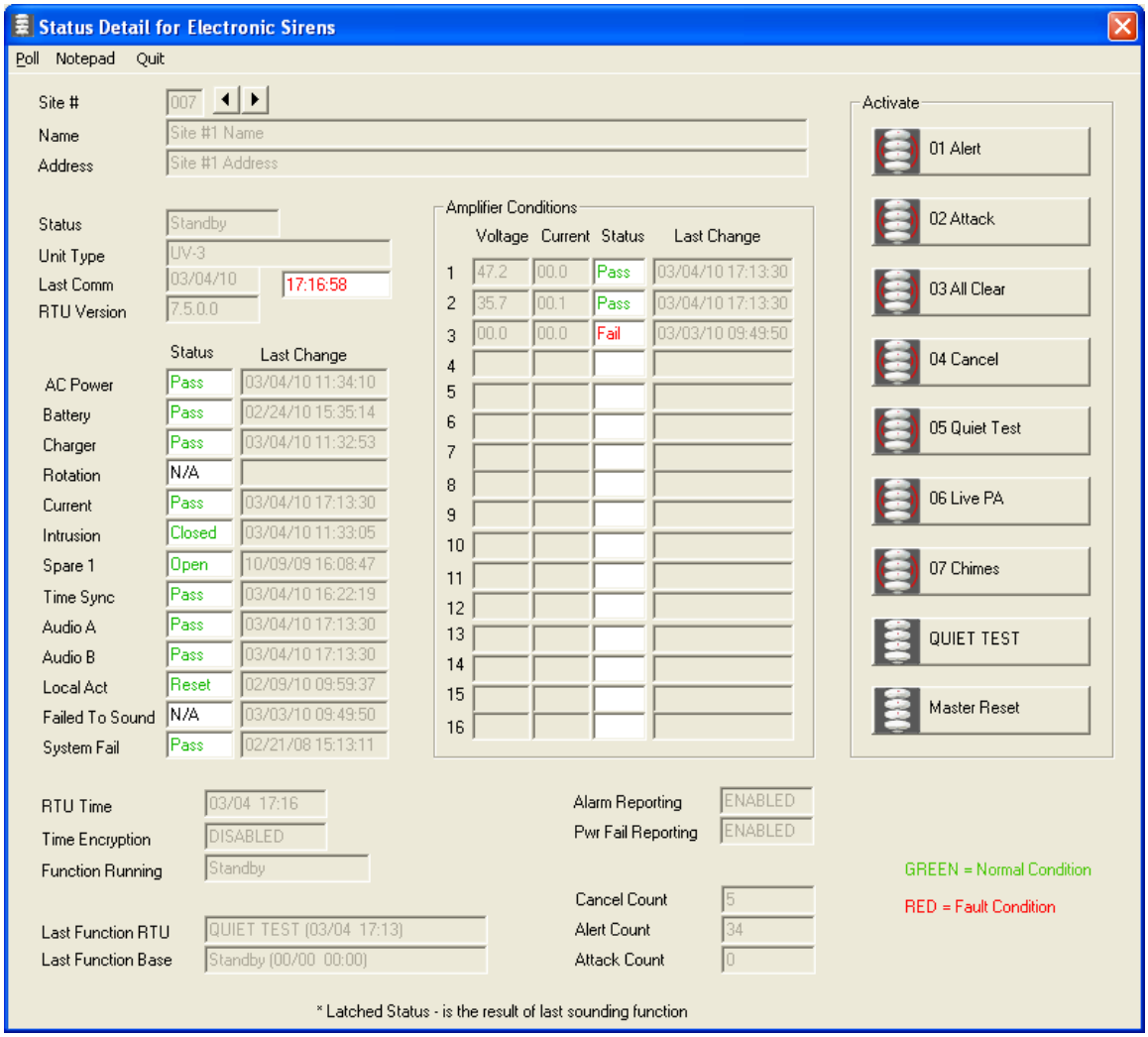
1. Last Function Base and Last Function RTU do not agree
2. The times disagree by more than 90 minutes

RTU Time

During each poll, the RTU's time clock is synchronized with the base computer or SS2000D. The current setting of the RTU's embedded clock is reported back to the base before this update occurs. This allows the system administrator to monitor the system time clock synchronization. The RTU Time should normally be within a few minutes of the base station's time during the last poll. If not, a possible synchronization problem exists. It is important to maintain system time clock synchronization. RTU's that are out of the time sync window (90 minutes) will not sound. Anytime the time synchronization becomes more than 45 minutes out of agreement, a Sync Fail alarm will be logged.

MCP Type Status Detail

If the selected RTU is a MCP or UltraVoice type siren, the following Status Detail screen will be displayed



The MCP status detail screen contains all the site conditions of the FCT Status Detail window discussed above with the following additional electronic siren specific information:

Spare1 -- Sensor status of the Spare1 input.
AudioA (latched) -- Siren controller Audio A channel active.
AudioB (latched) -- Siren controller Audio B channel active.
Amplifier Conditions

UV-RIU

The UV-RIU unit type is a special type of siren with the following features:

- The Current status point is sensed by the Spare1 input of the siren
- Battery voltage is reported and displayed just above the Function Count field

Amplifier Conditions:

Current

The maximum output current detected during the sounding of the Last Function.

Voltage

For MCP type units, the power supply voltage. For Ultra Voice type units, the output amplifier output voltage at the time of maximum current output.

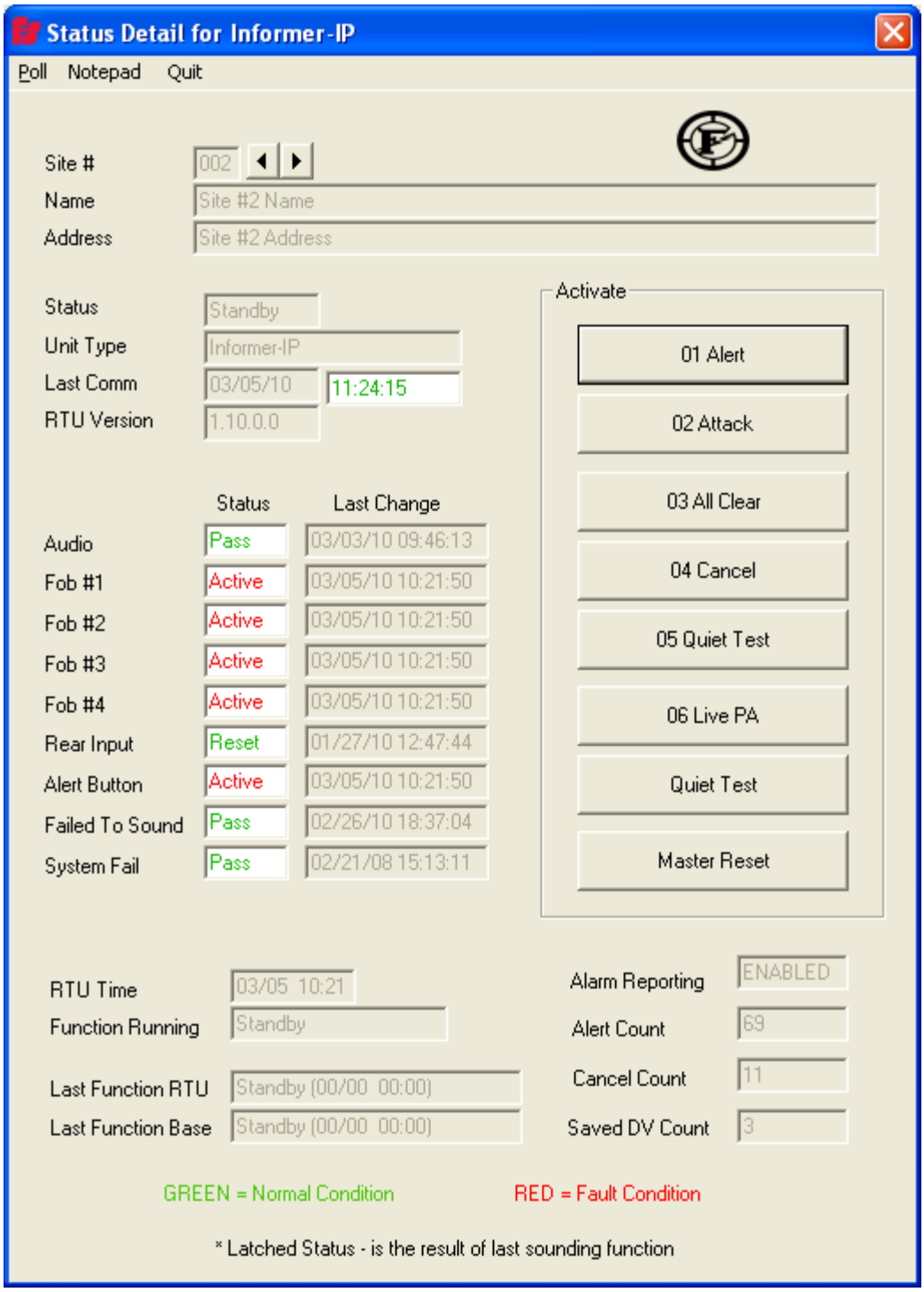
Status

Pass indicates that the correct amount of amplifier current and voltage were detected during the sounding of the Last Function. A Fail indication means one of the following fault conditions exists:

Amplifier is not making full power.
One or more speakers are faulty.
Wiring problem between amplifier and speakers.

Note: For MCP type units, each amplifier module contains two separate 200 watt amplifiers. Amp status 1 and 2 refer to amplifier module #1; 2 and 3 refer to module #2. The only exception is for type MCP6048T units (12 module systems). In this case, status data applies to the entire module. Both amplifiers in the module must make proper power to get a Pass status report.

Informer-IP Type Status Detail



AVAILABLE MENU SELECTIONS

Poll

This selection will cause the CCU to initiate a poll request for the selected RTU. The CCU will then wait for the RTU to reply with the requested poll data.

Notepad

This selection serves as a scratchpad allowing operators to log site specific information to a text file. This feature utilizes Windows Notepad™ and is for the convience of users. It serves no other purpose in the operation of SFCDWARE.

Quit

This selection will cause the Status Detail of RTU window to terminate.

Spin Control

The Spin Control (arrow buttons) selects the next or previous program entry.

STATUS DETAIL OF RTU FIELD DESCRIPTIONS

RTU #

This field contains the RTU number of the currently selected RTU

Status

This field contains the most current status setting of the current RTU. This status reflects the RTU status as of the last time the RTU and CCU communicated with each other.

Address

This field contains the street address information for the selected RTU.

Unit Type

This field contains the type of RTU located at this RTU site.

Last Comm

This heading has two data fields: Date and Time of last communication. The two fields will contain the CCU date and time stamp of the last time any communications were completed with the current RTU.

The Last Comm Time field will show in Green if the last communication was successful or Red if a Comm Fail occurred.

RTU Version

Displays the RTU software version number (will show 0.0.0.0 if the RTU does not support this feature).

Site Conditions

This field contains the site conditions (status) of this RTU. The following data is available:

Audio (Latched)
FOB1 – FOB4 (Latched)
Rear Input (Latched)
Alert Button (Latched)

Failed To Sound
System Fail

Note: FOB, Rear Input and Alert Button status points may be renamed (Reference Intercom Configuration-Input Options).

For data items marked Latched, once detected will remain latched (pass state) in the RTU's memory until a Master Reset, Quiet Test or Activation command is sent. This will allow the units to be polled at a later time following an activation to obtain activation status. It is very important for the operator to understand that all status data conditions are current as of the last poll and may not represent the present status conditions.

Failed To Sound

The “Failed to Sound” status point fails when one of the following conditions occurs:

1. Last Function Base and Last Function RTU do not agree
2. Last Function Base and Last Function RTU times disagree by more than 90 minutes
3. Audio Fail

“Failed to Sound” reporting may be enabled or disabled by the setting of the “Failed to Sound” field on the System Setup screen. If enabled a Failed to Sound fault may occur when the site is activated locally or non-digital activation (duotone, DTMF, etc). Failed to Sound may also occur if unit is activated by a remote digital station and Commander is unable to eavesdrop the remote station.

System Fail

The “System Fail” status point fails when the conditions defined on the System Fail setup dialog Alarm Filter is met for this siren site. Note: An individual site System Fail alarm does not imply a general System Fail alarm. A general System Fail alarm may require multiple site failures as defined on the System Fail setup dialog.

Alarm (Automatic) Reporting

Indicates if RTU auto reporting is enabled or disabled. If enabled, auto reporting occurs when any of the above status conditions changes state. If disabled, status is sent only when polled.

Power Fail Reporting

Indicates if RTU power fail reporting is enabled or disabled. If enabled, power fail reporting occurs when AC Power changes state. If disabled, status is sent only when polled.

Function And Cancel Counters

Contains the number of activation and cancel codes received by this RTU. These fields are cleared (set to zero) by the Clear Counters command from the send menu of Configure RTU Parameters.

Activate Site

These eight push buttons send an activation command to the selected RTU.

Function Running

Displays the function running at the time of the last poll. If no function is running, STANDBY is

displayed.

Last Function RTU

Displays the last function sounded by this RTU. The status of latched sensors (current, rotation, pressure, failed to sound) reflects the conditions of the siren as a result of the Last Function. If not function has sounded since a Master Reset, Standby will be displayed.

Last Function Base

Displays the last function activated by the base.

Note: If the Last Function base is not ‘Standby’, a Failed to Sound alarm will be asserted if one of the following conditions is met:

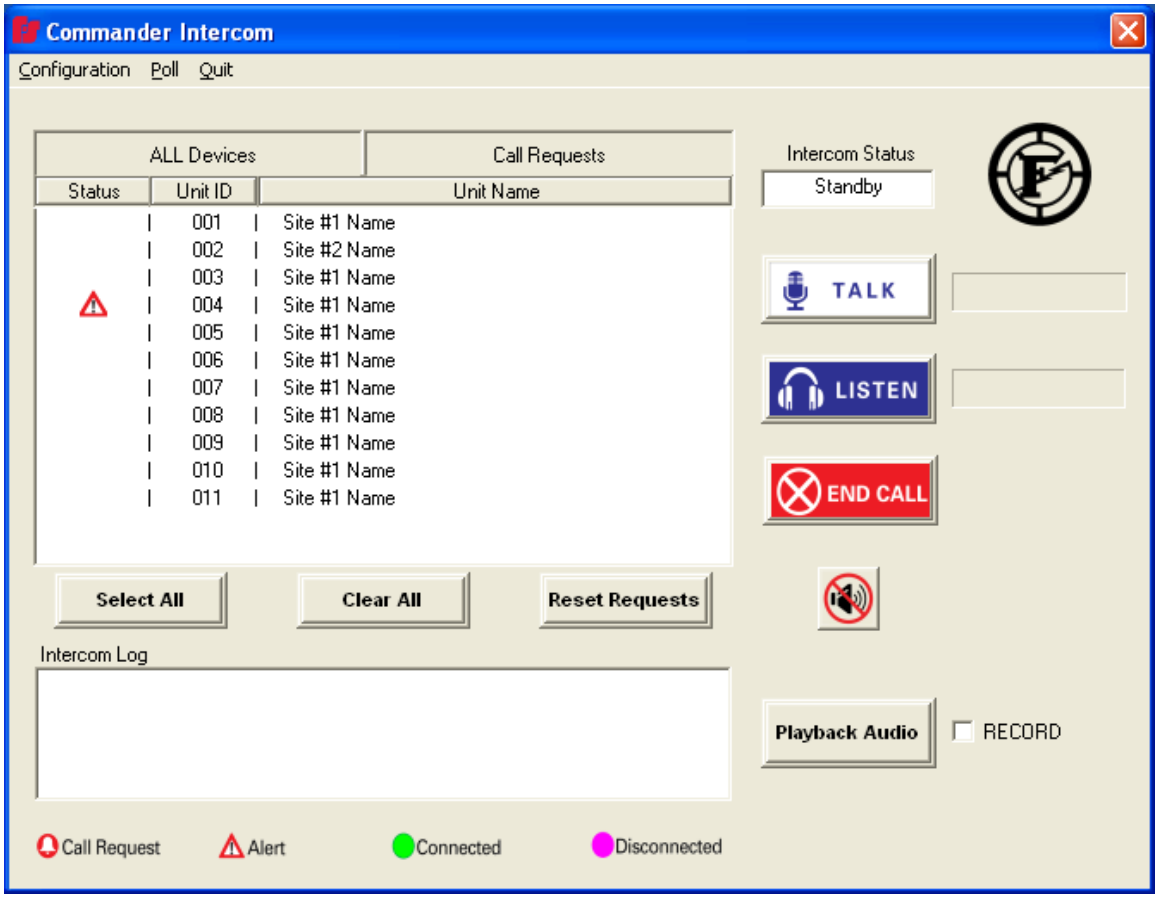
3. Last Function Base and Last Function RTU do not agree
4. The times disagree by more than 90 minutes

RTU Time

During each poll, the RTU’s time clock is synchronized with the base computer or SS2000D. The current setting of the RTU’s embedded clock is reported back to the base before this update occurs. This allows the system administrator to monitor the system time clock synchronization. The RTU Time should normally be within a few minutes of the base station's time during the last poll. If not, a possible synchronization problem exists. It is important to maintain system time clock synchronization. RTU’s that are out of the time sync window (90 minutes) will not sound. Anytime the time synchronization becomes more than 45 minutes out of agreement, a Sync Fail alarm will be logged.

Intercom

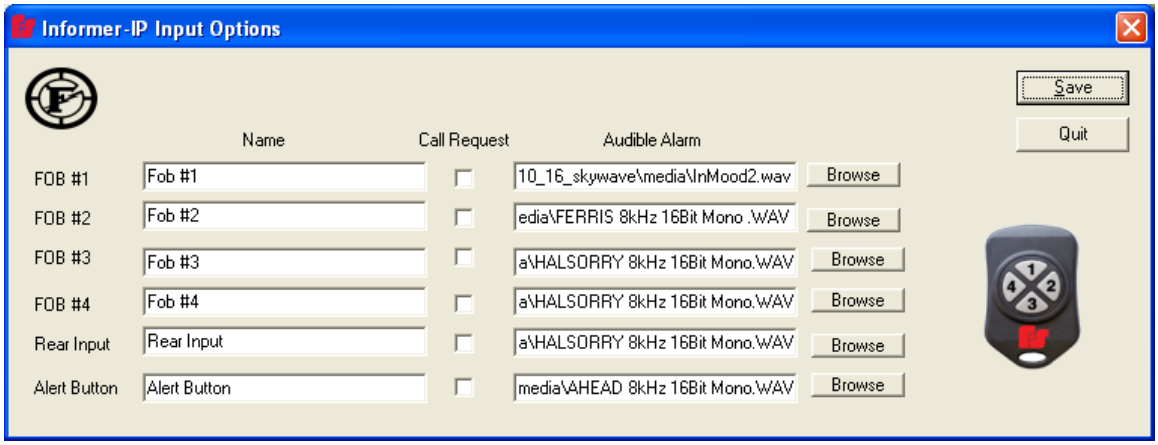
The Intercom selection displays the screen used to initiate a conversation with Informer-IP type units.



Menu selections:

Configuration – Input Options

This selection displays the Input Options dialog:



Name Column

The name column allows the user to change the name of the Informer-IP inputs and FOB buttons. The assigned name will appear on the Status Detail screen and all Smart Messages and Emails associated with the respective input

Call Request

If this option is Checked, the input is designated a Call Request input. Call Request is defined as a request for communication with the base. When Call Request is received the Intercom screen is automatically displayed and a Bell icon displayed in the status column.

Important: An incoming Call Request does not start a communication session. The base must initiate the communication session by talking or listening to the respective unit.

Configuration – Listen Record options

Displays a dialog used to configure Listen and Recording privileges. Before selecting this option select ONE site in the list. Listen/Record options are configured independently for each Informer-IP site:

Informer-IP Listen/Record Options
Site #1 Name
004
Save
Quit
Select ONE of the Following Options for the Selected RTU:
Enable Listen and Recording Anytime
Allow Listen and Recording Only After Call Request
Disable Listen and Recording Options

Poll

Clicking this menu item will poll all Informer-IP type units.

All Devices tab

Clicking this tab displays all Informer-IP type units. The Status column indicates the current status of the respective unit:

Call Request tab

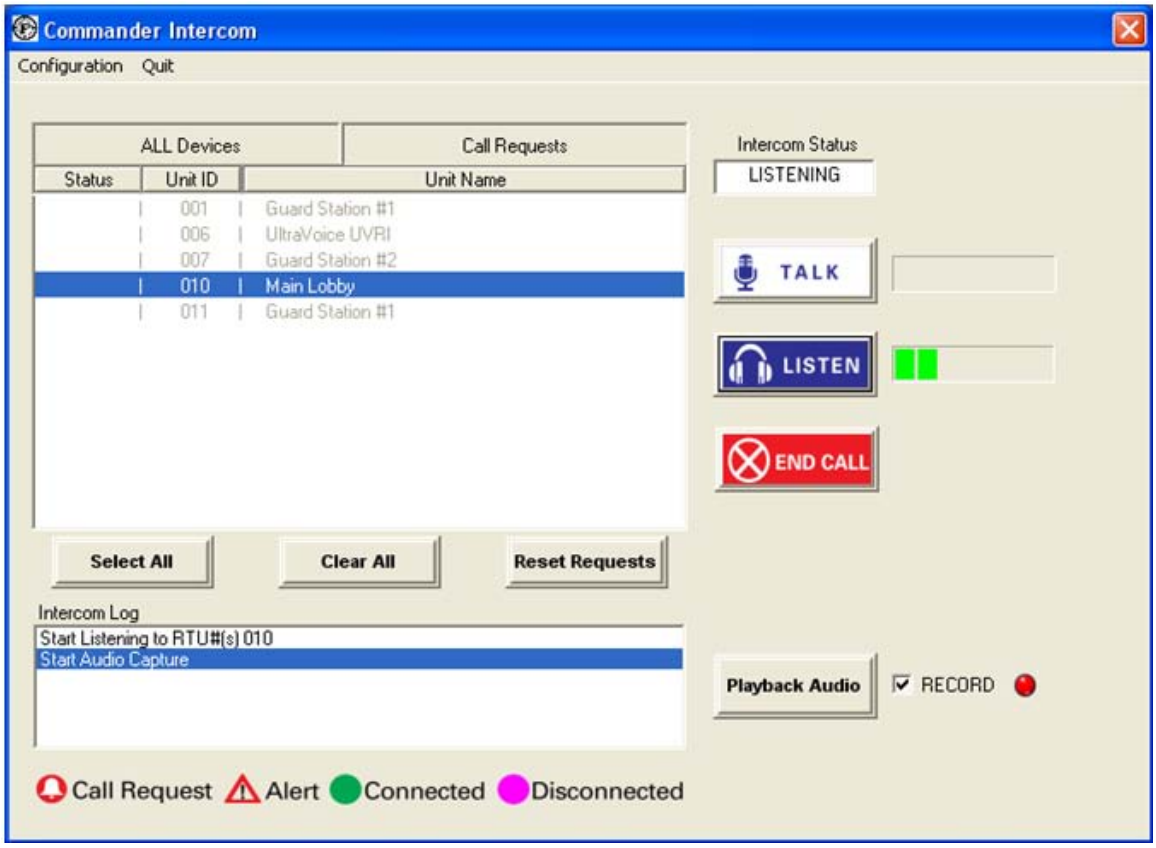
Displays only units requesting Call Request

Using the Intercom

The Intercom function is used to provide bi-directional voice communications between the Informer-IP and the EOC control point. The EOC can talk to one or many units at the same time but only one device can be listened to or recorded at a time. The Federal Commander GUI runs the Intercom session.

Intercom Call Requests may be initiated by the Informers. A Call Request will launch the Intercom window in the GUI if it isn't already up. The EOC can view all devices that are requesting a call. Requests are indicated by a red bell Icon on the Intercom screen at the EOC. EOC operators select which Informer they want to start an Intercom Session/Call with by highlighting the device on the Intercom screen.

Note: Make sure the Informer-IP is not near the microphone at the control point or an audio feedback loop will be created.



Record Checkbox

If the Record checkbox is checked, the Intercom Talk and Listen Chat session will be recorded until the Intercom session is ended by pressing the End Call button. The Informer-IP individual configuration settings determine if and when the Intercom Chat session can be recorded. Recordings are stored in a wavefile in the AudioCapture subdirectory within the Commander program directory.

Selecting an Informer Device

An Informer must be selected within the Device Listbox in the Graphical User Interface (GUI) to begin a Call, Configure, or view the current status of the device. The devices can be selected by clicking on the row in the list box containing the Informer or by clicking the Select All button. If the row is double clicked, the Status Detail screen for the device will be displayed.

The devices that show in the listbox can be selected by the Show All Devices button and the Show Call Requests button located on top of the listbox. The devices can be sorted within the listbox by clicking on the top of each column to sort by Status, Unit ID, or Unit Name.

Talk Button

The Talk button initiates an Intercom Chat session and allows the EOC operator to send live voice announcements using a PC microphone. One or more Informers must be selected to talk to by clicking on the row in the list box containing the desired Informer. The Talk button will change to a Listen button that can be pressed to allow the EOC operator to listen to the local microphone in the Informer. Since only one Informer can be listed to at a time, listen will not be

possible when multiple Informers are selected. The dual purpose button allows the operator to switch between talking and listening just by clicking the mouse.

The Talk session will remain active until the Listen or End Call button is selected.

Listen Button

The Listen button initiates an Intercom chat session and allows the EOC operator to listen to the local mic inside the Informer-IP that has been selected to listen to. Only one Informer-IP can be listened to at a time. The Listen session will remain active until the Talk or End Call button is selected.

End Call Button

The End Call button terminates an Intercom session and stops the recording process.

Intercom Status Window

The Intercom Status window shows the current operating state of the Intercom. There are three possible states: Standby, Talking and Listening.

Intercom Log Window

The Intercom Log shows all Intercom communication activity including which device is being communicated with. The user can scroll through the entries.

Select All Button

The Select All button allow all devices to be selected at once for an Intercom Talk session.

Clear All Button

The Clear All button clears all device selections at once.

Reset Requests Button

The Reset Requests button resets all current Call Requests indicated by the bell icon. The bell icon will change to the Alert icon until the device is Reset with a Master Reset from the control point. Call Requests can be re-initiated as soon as they are Reset.

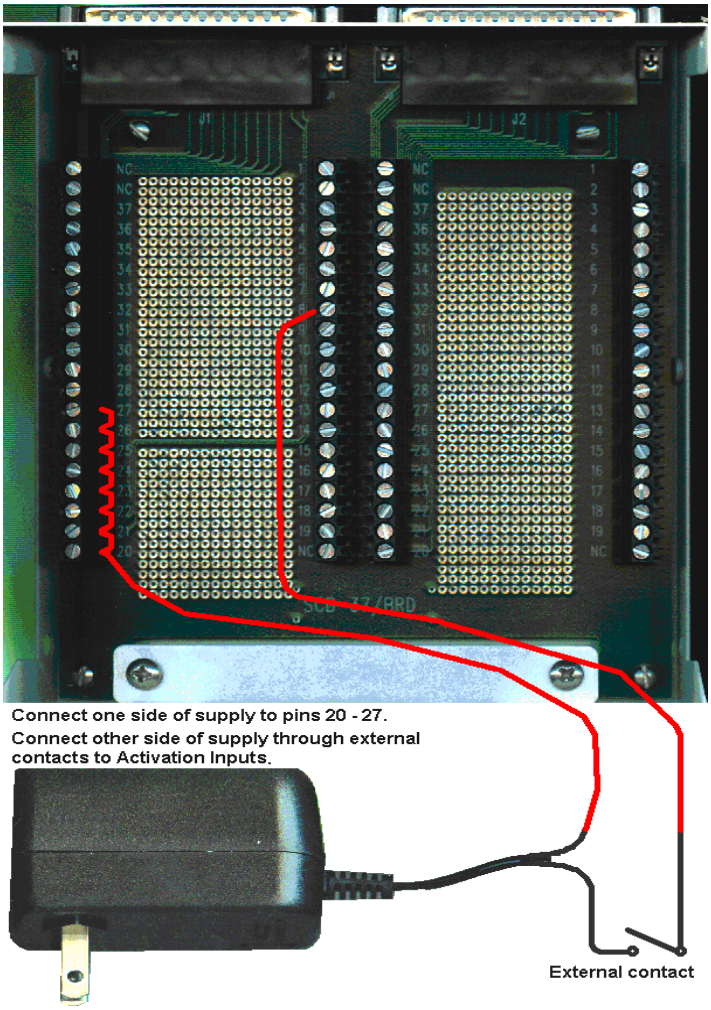
Playback Audio Button

The Playback Audio button allows the control point operator to view all recorded calls and select any recorded call for playback.

When the EOC is talking, the Informer can listen but not talk. The Informer's blue LED will light steady when the EOC is talking. When the EOC is listening to the Informer, the Informer's blue LED will flash on and off to indicate that the EOC is listening to the Informer. The EOC is in control of which Informer is included in the call and when the Informer can talk or listen.

Connections to the I/O Card

The isolated inputs are activated by a 5 – 28V DC voltage. A power source or supply will be needed to activate the inputs. If the inputs are to be activated through a relay from another piece of equipment, the power will need to be routed through the relay contacts.


Connect one side of supply to pins 20 - 27.
Connect other side of supply through external contacts to Activation Inputs.
External contact

Isolated inputs

The PCI-PDISO8 has eight isolated input channels. A schematic of a single channel is shown in Figure 4-3. The signals are routed through a bridge rectifier so that the inputs are not polarity sensitive.

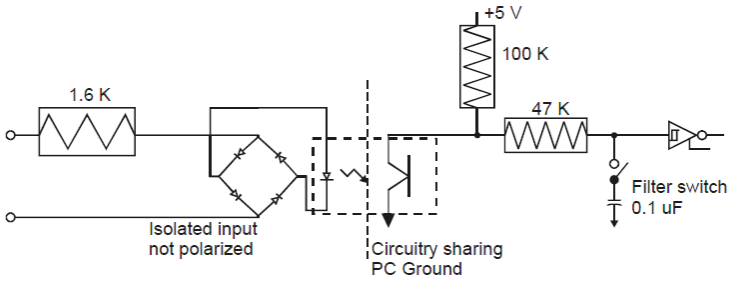
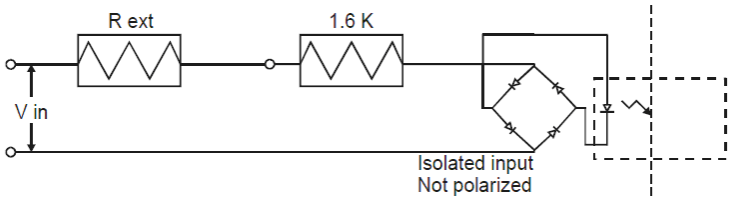


Figure 4-3. Isolated input schematic - simplified

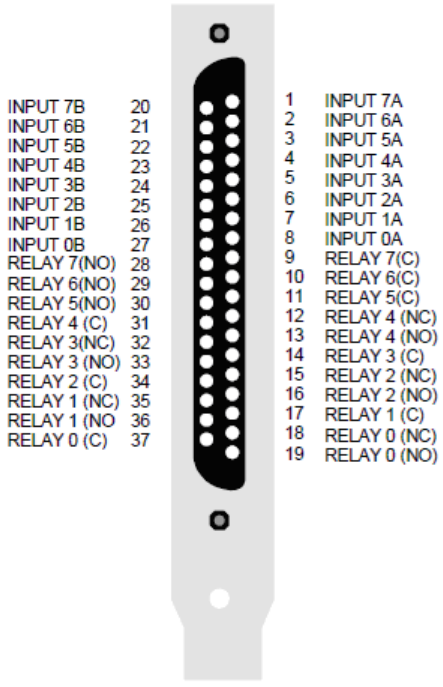
Extending the input range

To extend the input range beyond the 5-28V specified, add an external resistor. Figure 4-4 shows the resistor and the equations used to calculate resistor values for a given V_{in}.



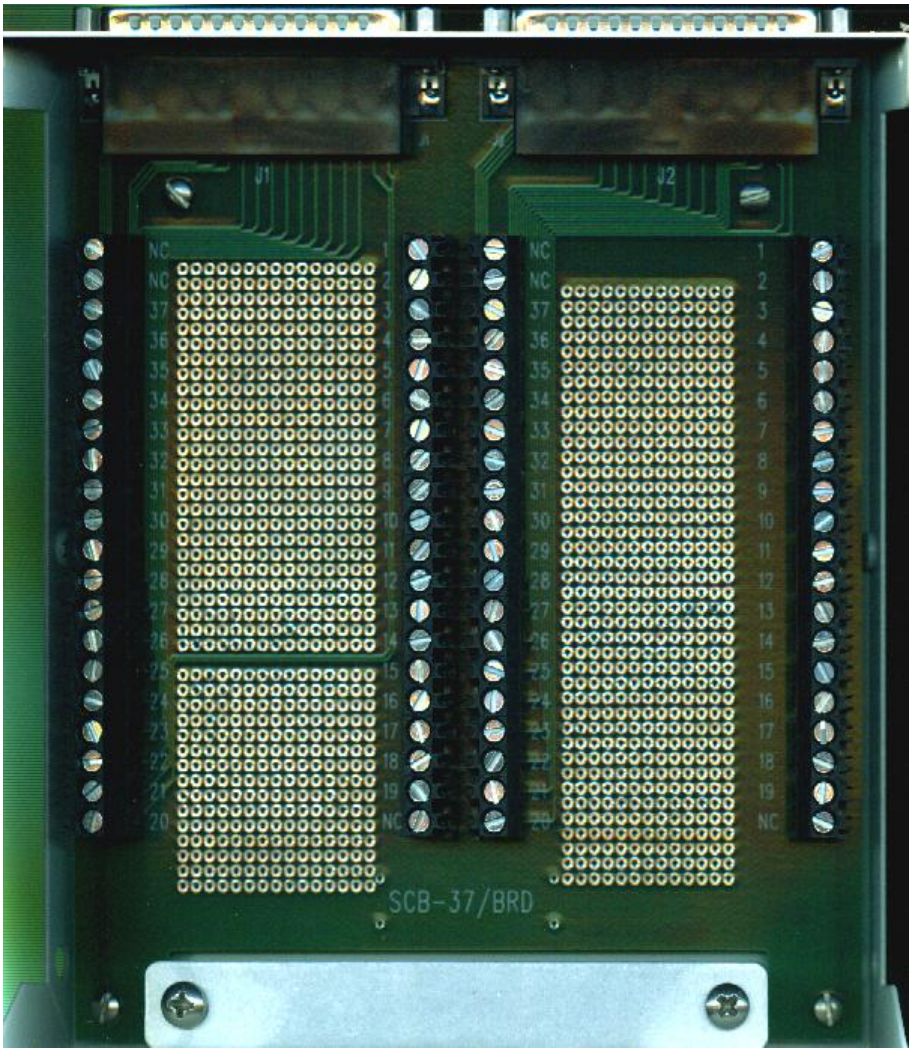
R ext = 100 * (V in - 28)
Pw = R ext / 10,000

Pin out – main I/O connector



37 PIN CONNECTOR - (NO) = Normally Open, (C) = Common, (NC) = Normally Closed.

The pin numbers of the main I/O connector correspond to the terminal numbers of the SB37 terminal box. For example; the first input, Input0, can be activated by supplying a voltage to pins 8 and 27 of the main I/O connector or 8 and 27 of the SB37 terminal box.



I/O Card Specifications

Relay specifications

Table 1. Relay specifications

Number	5
Contact configuration	5 FORM C (SPDT) RELAY 0 through RELAY 4
Contact rating	*6 A @ 120 VAC or 28 VDC resistive (see connector rating below)*
Contact resistance	100 milliohms max
Operate time	*20 milliseconds max*
Release time	*10 milliseconds max*
Vibration	*10 to 55 Hz (Dual amplitude 1.5 mm)*
Shock	*10 G (11 milliseconds)*
Dielectric isolation	*500 V (1 minute)*
Life expectancy	*10 million mechanical operations, min*
Power on RESET state	Not energized. NC in contact to Common.

Isolated inputs

Table 2. Isolated input specifications

Number	8	
Isolation	*500 V*	
Resistance	1.6 k Ohms min.	
Voltage range	DC:	5 to 28 V (Not TTL compatible)
	AC:	5 to 28 V (50 to 1000 Hz)
Input 'High' level	>5V min (positive or negative input voltage - not TTL compatible)	
Input 'Low' level	<2.5V max (positive or negative input voltage)	
Response	w/o filter:	20 µS
	w/filter:	5 mS
Filters	Time constant:	5 mS (200 Hz)
	Filter control:	Software programmable at each input
	Power-up /reset:	Filters off

Environmental

Table 4. Environmental specifications

Operating temperature range	0 to 70 °C
Storage temperature range	-40 to 100 °C
Humidity	0 to 90% non-condensing

Main connector and pin out

Table 5. Main connector specifications

I/O connector type	37-pin D connector
Compatible cable	C37FF-x, where x = length in feet C37FFS-x, where x =5 or 10 feet
Compatible accessory products (with the C37FFS-x and C37FF-x cables)	CIO-MINI37 SCB-37
Max current	5 A

Table 6. Connector pin out

Pin	Signal Name	Pin	Signal Name
1	Input 7A	20	Input 7B
2	Input 6A	21	Input 6B
3	Input 5A	22	Input 5B
4	Input 4A	23	Input 4B
5	Input 3A	24	Input 3B
6	Input 2A	25	Input 2B
7	Input 1A	26	Input 1B
8	Input 0A	27	Input 0B
9	Relay 7 (C)	28	Relay 7 (NO)
10	Relay 6 (C)	29	Relay 6 (NO)
11	Relay 5 (C)	30	Relay 5 (NO)
12	Relay 4 (NC)	31	Relay 4 (C)
13	Relay 4 (NO)	32	Relay 3 (NC)
14	Relay 3 (C)	33	Relay 3 (NO)
15	Relay 2 (NC)	34	Relay 2 (C)
16	Relay 2 (NO)	35	Relay 1 (NC)
17	Relay 1 (C)	36	Relay 1 (NO)
18	Relay 0 (NC)	37	Relay 0 (C)
19	Relay 0 (NO)		

Language Translation

To facilitate translation into languages other than English, most strings used in SFCDWARE are contained in a file named “Resource.fil”. Each line of this file contains a line number followed by a string in quotation marks:

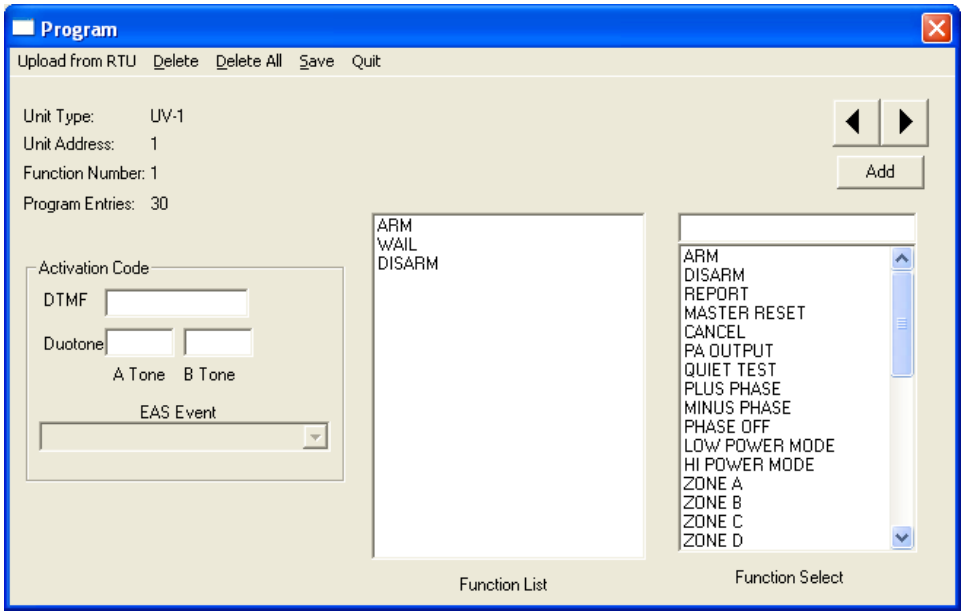
380 "Double click desired zone"

There are some important rules to follow when editing a string:

- Only change what is between the quotation marks. Do not edit the line number of anything between the line number and the first quotation mark (there are tab characters between the line number and first quotation mark that must be present).
- If possible keep the length of translated strings shorter or equal to the length of the original English string. Longer strings may not fit in the space allocated on the screen.
- The following strings must not exceed their original English length:

  Fail
  Open
  Pass
  Reset
  Modem
  Closed
  Standby
  Enabled
  Disabled

- Function name strings must be 19 characters or less.
- UltraVoice program Function Lists must be deleted and recreated after the translation file is changed. The strings that appear in the “Function List” must match those in the “Function Select” box. If not, the siren will not be programmed successfully and may fail to operate.


Program
Upload from RTU
Delete
Delete All
Save
Quit
Unit Type: UV-1
Unit Address: 1
Function Number: 1
Program Entries: 30
Add
Activation Code
DTMF
Duotone
A Tone
B Tone
EAS Event
ARM
WAIL
DISARM
Function List
ARM
DISARM
REPORT
MASTER RESET
CANCEL
PA OUTPUT
QUIET TEST
PLUS PHASE
MINUS PHASE
PHASE OFF
LOW POWER MODE
HI POWER MODE
ZONE A
ZONE B
ZONE C
ZONE D
Function Select

Service and Customer Support

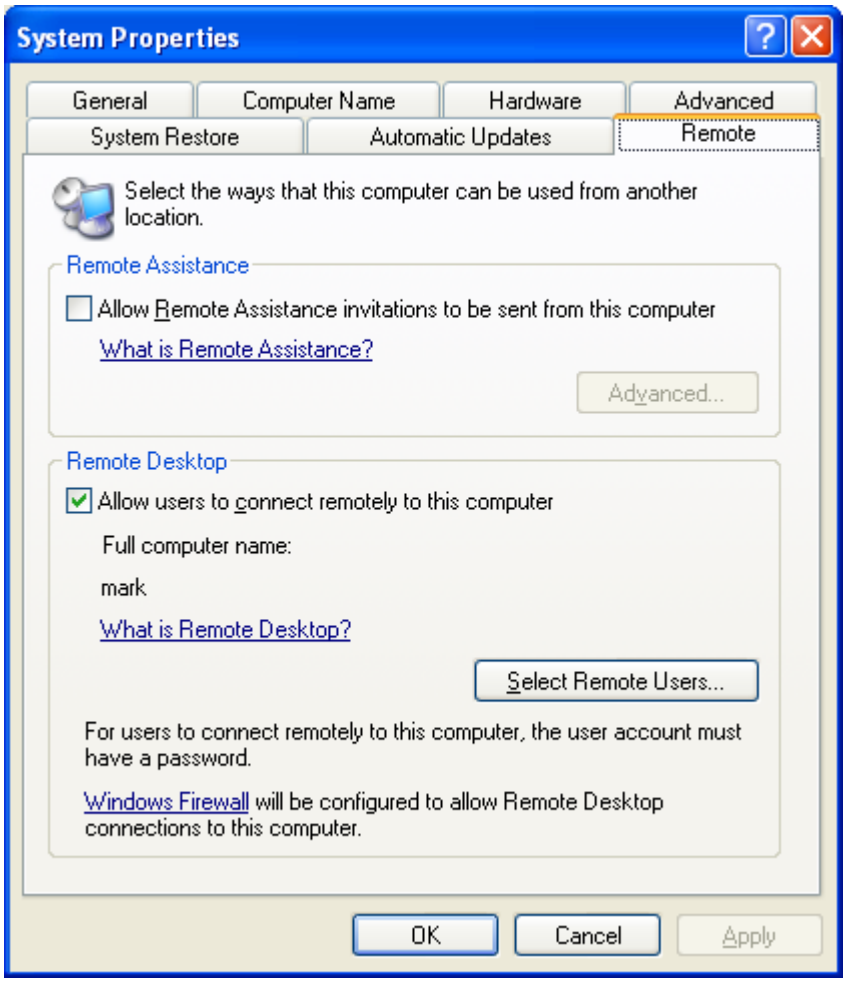
If service or customer support is required write down the Customer Number located on the lower right corner of the Status Base screen and the software version number located on the top title bar. Contact the Federal Signal Service department at: 1-800-524-3021 and present the Customer Number for identification.

Remote Desktop

If required, Federal Signal may request access to your system on the Internet using Remote Desktop. To enable Remote Desktop, follow the procedure below:

1. From the Start menu, right click on “My Computer” and select Properties.

2. Select the “Remote” tab from the System Properties Dialog and enable “Allow Users to connect remotely to this computer.



3. The service technician will need to know the username and password of a user with Administrative rights to access the system.

Remote Assistance

Instructions For Requesting Remote Assistance in Windows XP

I. Purpose: The purpose of this document is to establish a written procedure on how to request remote assistance in Windows XP.
Remote Assistance is a technology in Windows XP which enables Windows XP users to help each other over the Internet. With this tool, one user, called the "Expert," can view the desktop of another user, the "Novice." With the Novice's permission, the Expert can even share control of the Novice's computer to resolve issues remotely..
Note: An instruction is also available at the Microsoft website.
http://support.microsoft.com/?kbid=300546

II. Qualifications: Intermediate level computer knowledge required.

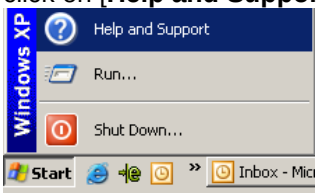
III. Precautions: Customer is responsible for computer security, virus protection, ensuring proper permission and documentation is accomplished in reference to software policy.

IV. Requirements: *(If unable to confirm any of the following requirements please contact the local computer expert)*

1. Both the novice's computer and the expert's computer must be running a version of Windows XP, XP Pro, or Windows Server.
2. The novice's computer and the expert's computer must be connected to the Internet.
3. The novice's computer **must be able to send an email**.

V. Sending a Remote Assistance Invitation:

1. Contact the expert and set up a time and date for the 'Remote Assistance'.
2. Get the email address of the expert's computer _____. i.e. techsupport@fedsig.com
3. Open Help and Support Center, by using the mouse to left-click on [**Start]**, and then left-click on [**Help and Support]**.



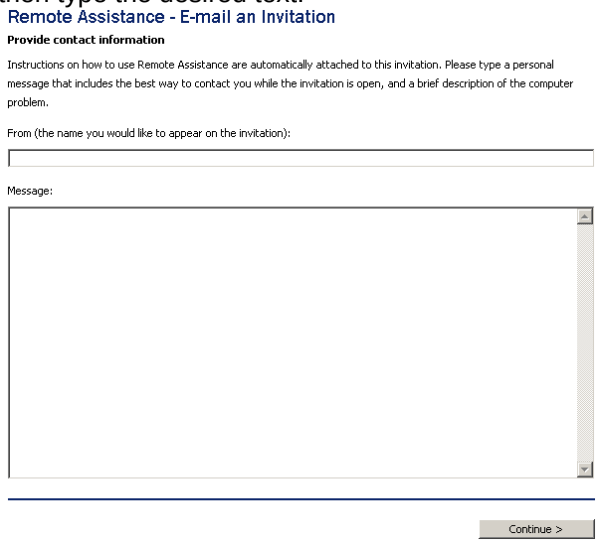
4. Under **Ask for Assistance**, using the mouse, left-click on [**Invite a friend to connect to your computer with Remote Assistance]**.

5. The Remote Assistance page is displayed. Using the mouse, left-click on [**Invite someone to help you]**.

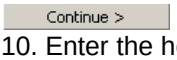
6. Using the mouse, left-click on 'Type in e-mail address' box . Type in the email address for the expert's computer.
i.e. techsupport@fedsig.com

7. Using the mouse left-click on [Invite this person].

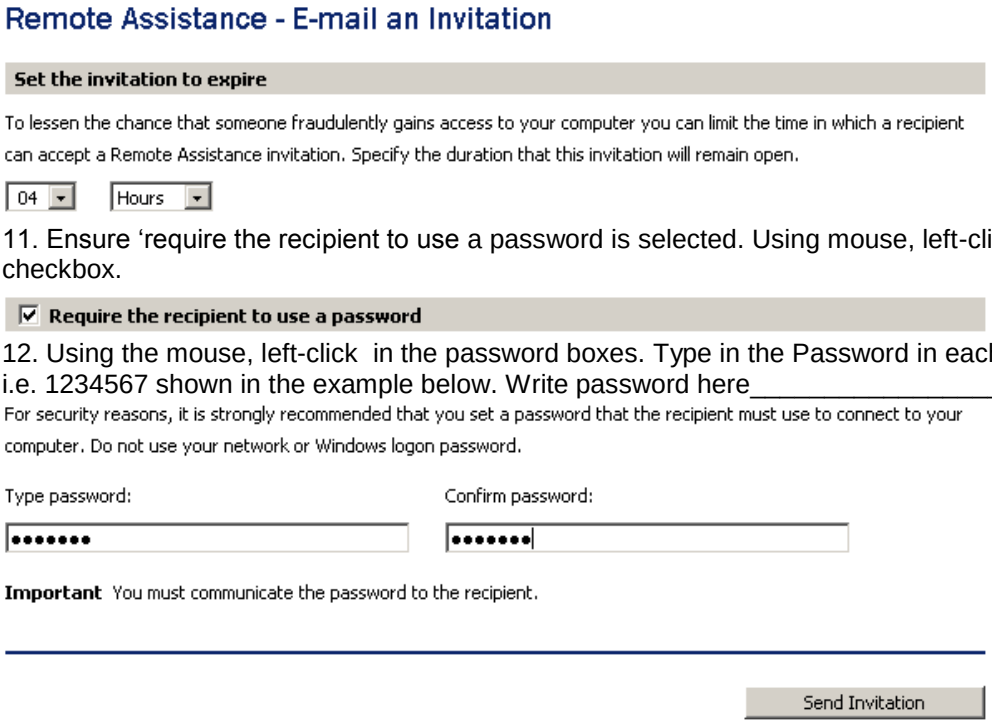
8. If desired, type your name and a message. Using the mouse left-click on each box and then type the desired text.


Remote Assistance - E-mail an Invitation
Provide contact information
Instructions on how to use Remote Assistance are automatically attached to this invitation. Please type a personal message that includes the best way to contact you while the invitation is open, and a brief description of the computer problem.
From (the name you would like to appear on the invitation):
Message:
Continue >

9. Using the mose, left-click on [Continue]



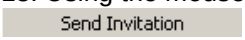
10. Enter the hours duration, by using the mouse and left-clicking on the arrow, and then selecting the hours.
i.e. 4 hours shown in the example below.


Remote Assistance - E-mail an Invitation
Set the invitation to expire
To lessen the chance that someone fraudulently gains access to your computer you can limit the time in which a recipient can accept a Remote Assistance invitation. Specify the duration that this invitation will remain open.
04
Hours
Require the recipient to use a password
For security reasons, it is strongly recommended that you set a password that the recipient must use to connect to your computer. Do not use your network or Windows logon password.
Type password:
Confirm password:
Important You must communicate the password to the recipient.
Send Invitation

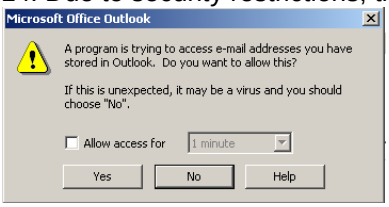
11. Ensure 'require the recipient to use a password is selected. Using mouse, left-click on the checkbox.

12. Using the mouse, left-click in the password boxes. Type in the Password in each box. i.e. 1234567 shown in the example below. Write password here_____.

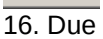
13. Using the mouse, left-click on [Send Invitation]



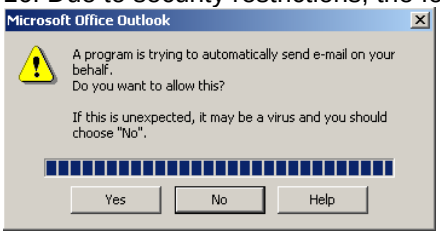
14. Due to security restrictions, the following window may be displayed.


Microsoft Office Outlook
A program is trying to access e-mail addresses you have stored in Outlook. Do you want to allow this?
If this is unexpected, it may be a virus and you should choose "No".
Allow access for
1 minute
Yes
No
Help

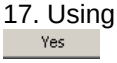
15. Using the mouse, left-click on [Yes]



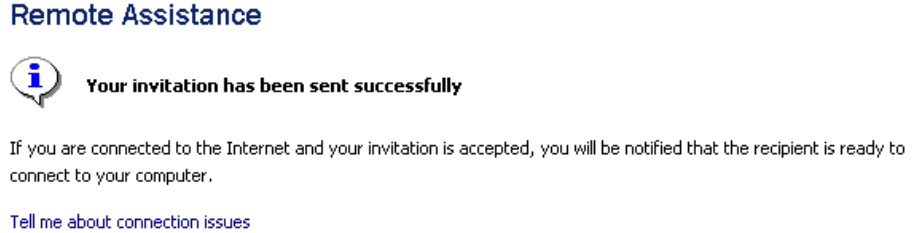
16. Due to security restrictions, the following window may be displayed.


Microsoft Office Outlook
A program is trying to automatically send e-mail on your behalf.
Do you want to allow this?
If this is unexpected, it may be a virus and you should choose "No".
Yes
No
Help

17. Using the mouse, left-click on [Yes]



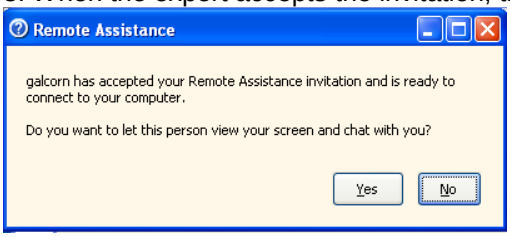
18. The following window should be displayed.


Remote Assistance
Your invitation has been sent successfully
If you are connected to the Internet and your invitation is accepted, you will be notified that the recipient is ready to connect to your computer.
Tell me about connection issues

19. Congratulations, you have successfully sent a remote assistance request.

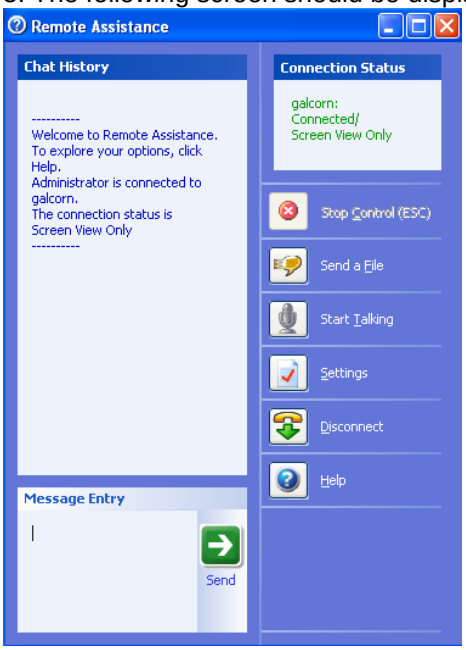
VI. Authorizing the Remote Assistance:

1. Contact the expert and share the password.
2. Ask the expert to contact your computer.
3. When the expert accepts the invitation, the following screen should be displayed.


Remote Assistance
galcorn has accepted your Remote Assistance invitation and is ready to connect to your computer.
Do you want to let this person view your screen and chat with you?
Yes
No

4. Using the mouse, left-click on [Yes]

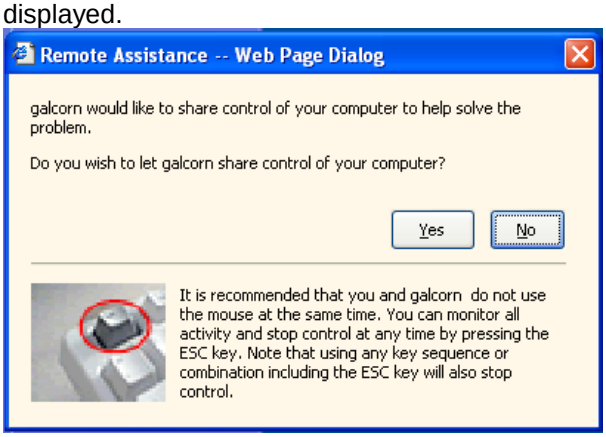
5. The following screen should be displayed.



5. If desired, type a message to the expert. Using the mouse, left-click on 'Message Entry' box and then type the message.

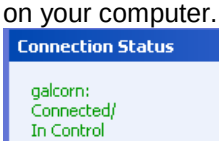
VII. Authorizing the share control of computer:

1. When the expert is ready to share control of computer, the following screen should be displayed.


Remote Assistance -- Web Page Dialog
galcorn would like to share control of your computer to help solve the problem.
Do you wish to let galcorn share control of your computer?
Yes
No
It is recommended that you and galcorn do not use the mouse at the same time. You can monitor all activity and stop control at any time by pressing the ESC key. Note that using any key sequence or combination including the ESC key will also stop control.

2. Using the mouse, left-click on [Yes]

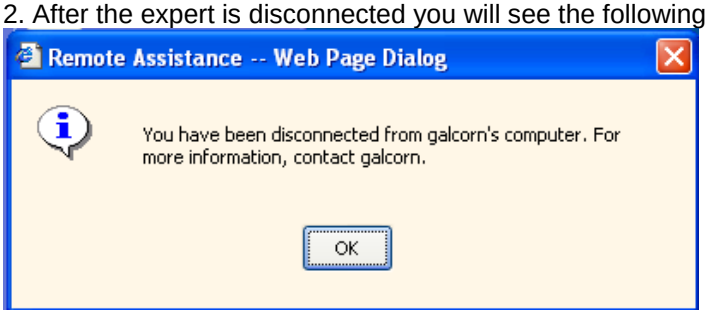
3. When the expert is in control you will see the following. You will also see the expert actions on your computer.



VIII. Disconnecting the share control of computer:

1. For immediate disconnect. Using the mouse left-click on the ‘Disconnect’ icon.

2. After the expert is disconnected you will see the following screen.


Remote Assistance -- Web Page Dialog
You have been disconnected from galcorn's computer. For more information, contact galcorn.
OK

3. Click on [X] in the upper right corner of the program to close the program.